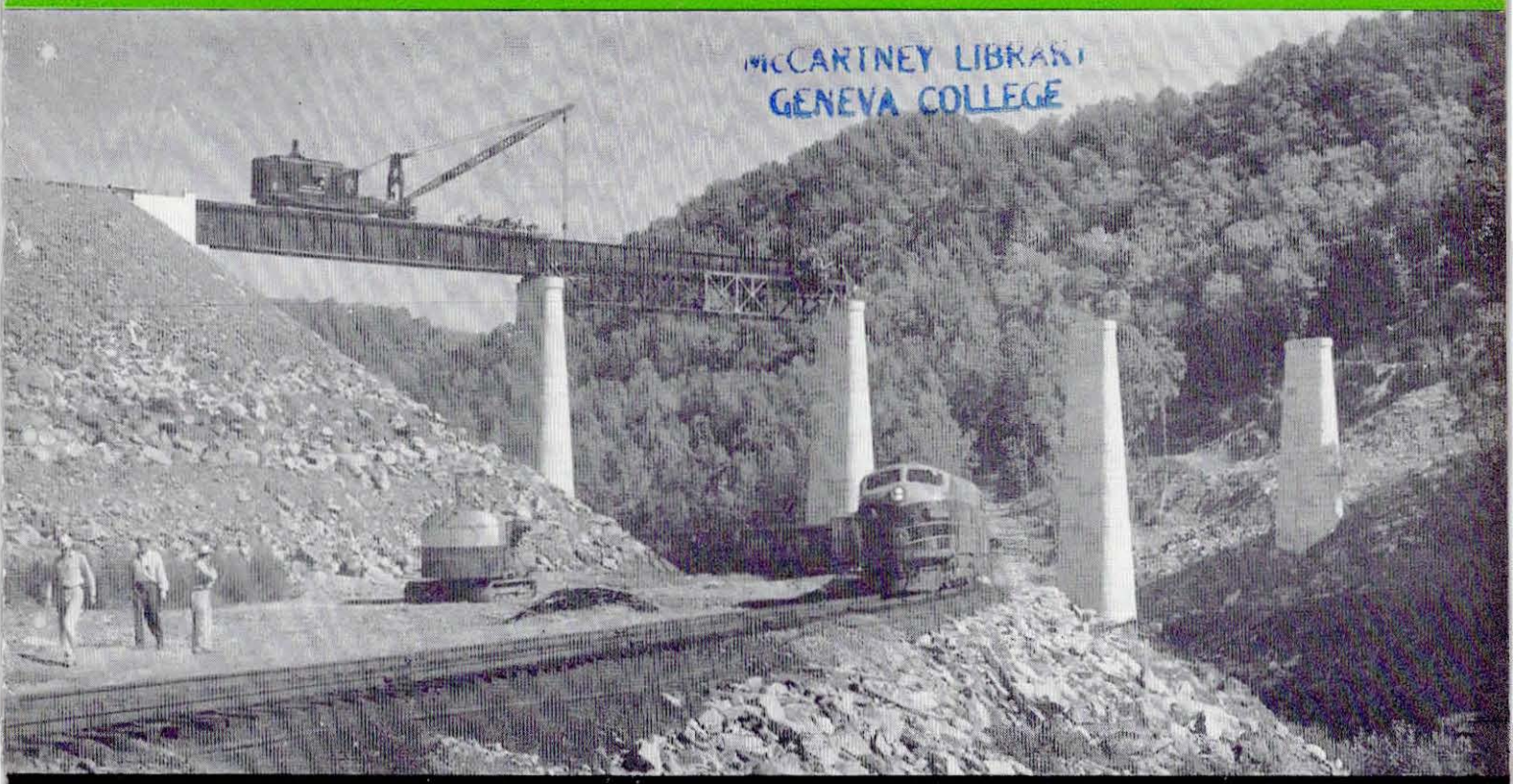
Rates – Based on Cost or 'Demand'?

September 7, 1959

RAILWAY AGE *weekly*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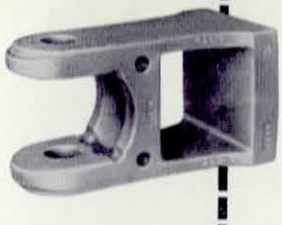

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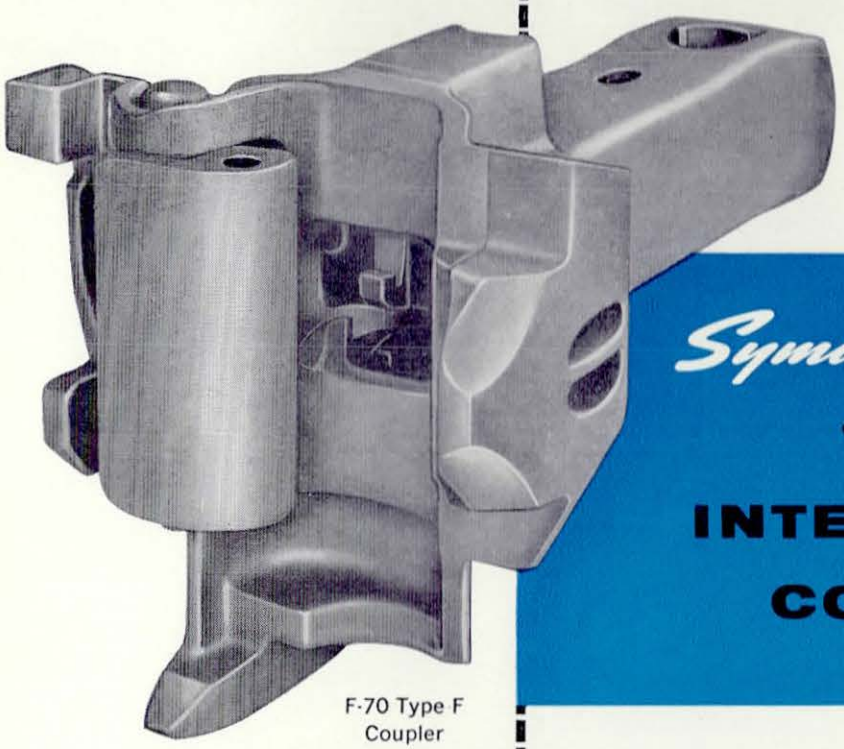

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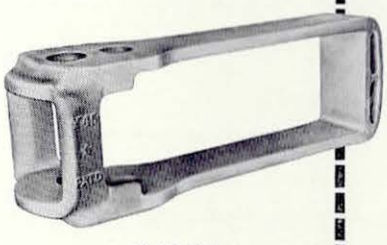

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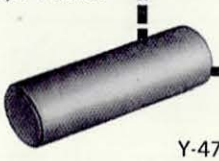
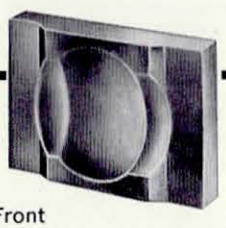


Y-47 Coupler
and Yoke Pin



Y-46 Front
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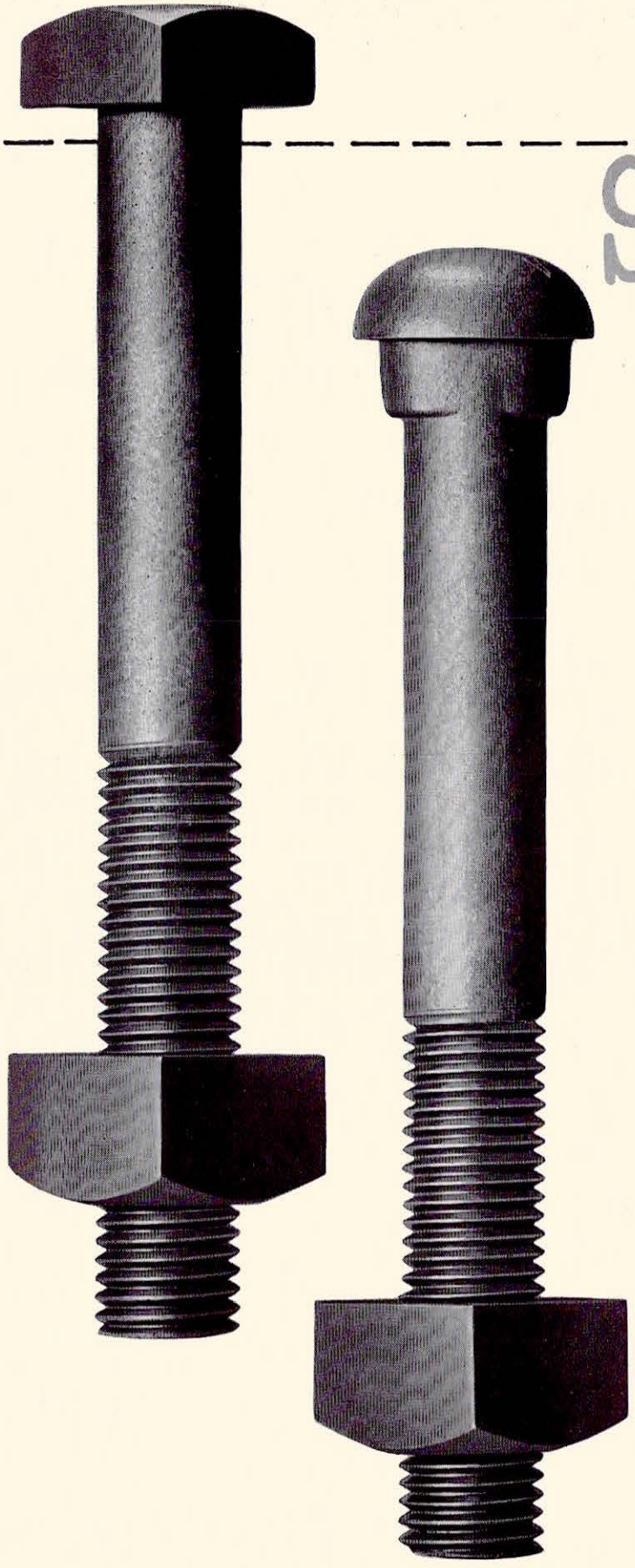

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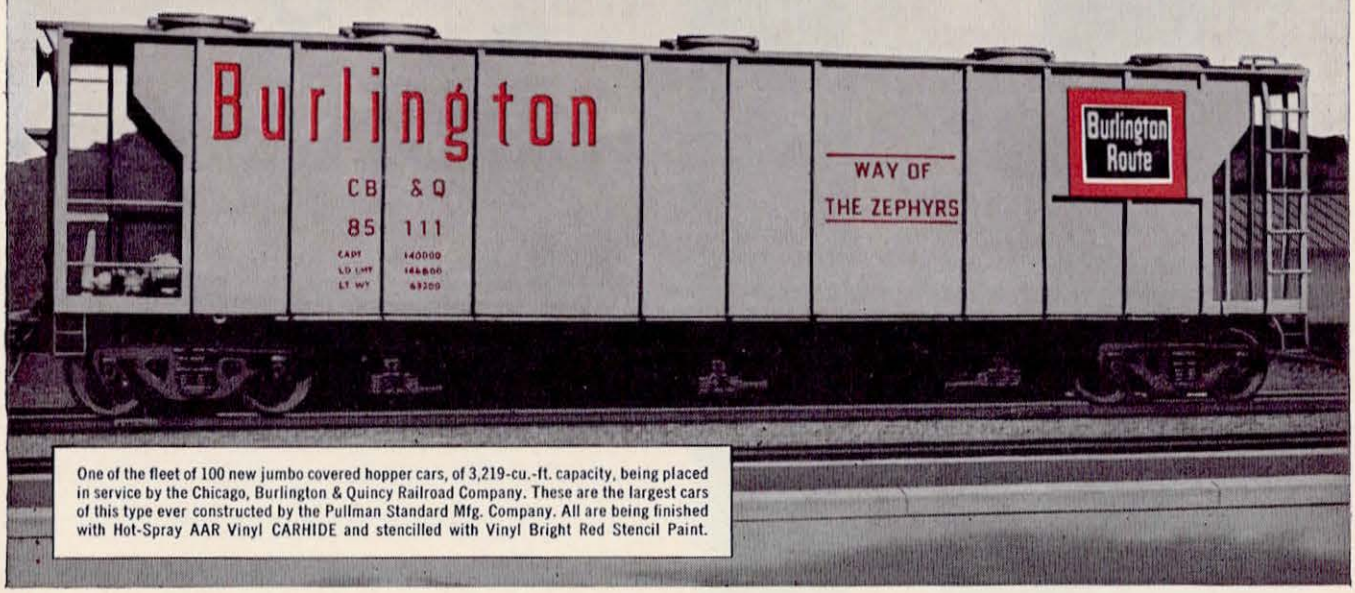

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RAILWAY AGE *weekly* September 7, 1959 • Vol. 147, No. 10

Week at a Glance

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Railway Age, established in 1856, is indexed by the Business Periodicals Index, the Engineering Index Service and the Public Affairs Information Service. Name registered in U.S. Patent Office and Trade Mark Office in Canada.

Published weekly by the Simmons-Boardman Publishing Corporation at 440 Boston Post Road, Orange, Conn. Second-class postage paid at the Post Office at Orange, Conn. James G. Lyne, chairman of the board; Arthur J. McGinnis, pdesident and treasurer; Duane C. Salisbury, executive vice president; George Dusenbury, vice president and editorial and promotion director; Robert G. Lewis, Joe W. Kizzle, M. H. Dick, M. J. Figa, R. C. Van Ness, vice presidents.

Non-ops ask 25-cent increase ..... p. 9

More liberal health and welfare benefits, including group life insurance, would bring the labor demand package to a total of 32 cents an hour.

Transport aid up to N. J. voters p.13

A statewide referendum slated for Nov. 3 is the next step to implement a plan that would divert Turnpike surpluses to aid other forms of transportation, including railroad commuter service.

TOFC's most versatile car p.14

A universal piggyback car has been developed by GATX. It combines the flexibility of a standard flat with the loading speed of the Clejan system. A prototype will be displayed this month at the Allied Railway Supply Association track exhibit in Chicago.

Cover Story—B&O upgrades a dam-flooded line p.16

A U.S. dam project—which flooded out part of a B&O branch—gave the road an opportunity to effect substantial operating economies.

Cover Story—C&O keeps its passengers p.20

The road's new ventures in the passenger field include acquisition of five RDCs (in barter deals with the C&NW and the M&StL), and selective fare reductions, sometimes coupled with a full train travel package.

Cover Story—Base rates on cost or 'demand'? p.24

There's too much emphasis on making rates at the level of out-of-pocket costs, fears Professor George W. Wilson of Indiana University. Professor Wilson believes each rate should reflect how much the shipper is willing to pay.

The Action Page—Car-mile earnings, poor yardstick p.50

Unless you know how many miles a car moves, its earnings per mile don't tell you anything. Except for longer hauls, above-average earnings per car-mile may be camouflaging a ruinous loss.

Short and Significant

Eastern carriers may be forced to seek . . .

a federal subsidy to overcome revenue losses brought on by St. Lawrence Seaway competition, according to Fred Carpi,

Special report to Caterpillar D8 Tractor owners:

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Parts you can trust.
Dependable round-the-clock service.

NOW—YOU CAN EQUIP YOUR D8 WITH LIFETIME LUBRICATED ROLLERS

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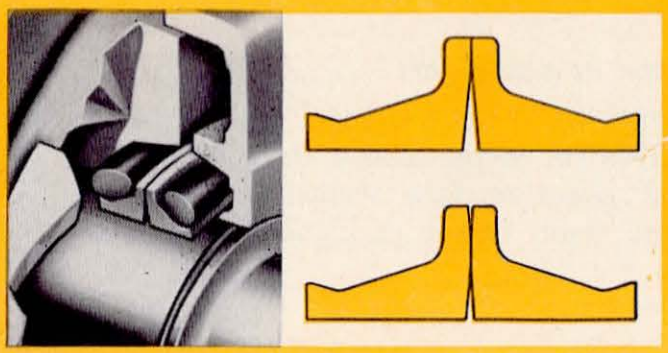
Forget about lubrication . . . and seal replacement. They're eliminated by this new concept in roller design and performance. The new lifetime lubricated rollers are lubricated when installed on your tractor. They'll never need lubrication until the rollers are disassembled for rim and flange rebuilding. The seals do not leak even after thousands of hours of operation. Seals won't need replacement when rollers are rebuilt. Another advantage—*oil* lubricant rather than grease is used because oil dissipates heat faster. Rollers operate at cooler temperatures. Bearings last longer.

New floating ring seal . . . wear does not decrease efficiency. The roller seal employs two metal alloy and two rubber "O" rings. The metal rings, much harder than file steel, have



lapped faces . . . smoother than glass. These faces taper slightly toward the inner edge forming a sealing area at the outer edge. As wear occurs, the sealing area moves inward, maintaining a perfect seal through thousands of hours.

The "O" rings keep constant pressure on the metal rings. Lubricant can't get out. Grit can't get in. There are no springs or diaphragms to weaken, wear or become damaged. "O" rings are made of special compound to resist oil, heat and cold.

Millions of hours of proof—the toughest track roller yet. Cat lifetime lubricated rollers have been subjected to extensive and exhaustive on-the-job tests *for over 5 years*. Working under all types of job conditions, these time-tested rollers have proven unequalled. Their success is further amplified by new machine owner reports—for low-cost performance and minimum maintenance, Cat lifetime lubricated rollers can't be beat.

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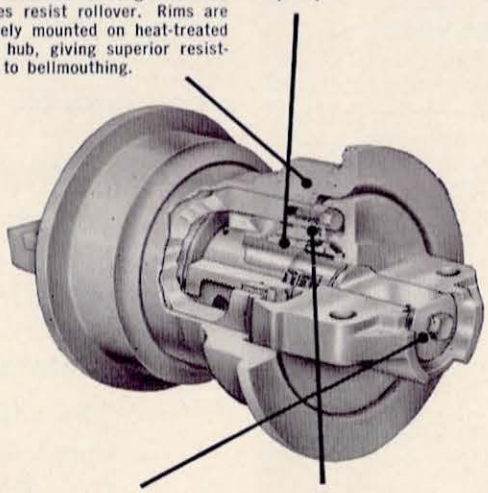

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SERVICE TIP: When rebuild time finally comes, be sure to keep the metal rings matched in original pairs, being careful not to nick or mar the lapped faces.

Week at a Glance CONT.

Current Statistics

Operating revenues	
7 mos., 1959	$5,847,512,418
7 mos., 1958	5,329,684,214
Operating expenses	
7 mos., 1959	4,562,546,451
7 mos., 1958	4,353,181,571
Taxes	
7 mos., 1959	632,589,611
7 mos., 1958	502,477,821
Net railway operating income	
7 mos., 1959	462,965,823
7 mos., 1958	300,654,566
Net income, estimated	
7 mos., 1959	337,000,000
7 mos., 1958	203,000,000
Average price railroad stocks	
Sept. 1, 1959	108.05
Sept. 2, 1958	108.40
Carloadings revenue freight	
34 wks., '59	20,565,936
34 wks., '58	18,948,763
Freight Cars on order	
Aug. 1, 1959	40,309
Aug. 1, 1958	25,994
Freight cars delivered	
7 mos., 1959	22,545
7 mos., 1958	31,658

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Circulation Dept.: R. C. Van Ness, Director of Circulation, 30 Church St., New York 7, N. Y. POSTMASTER—SEND FORM 3579 to EMMETT ST., BRISTOL, CONN.

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Pennsylvania vice president—sales. Mr. Carpi made the comment at Portland, Ore., during an extensive tour of western states. Initial industry reaction was surprise, tinged with opposition in the traditionally anti-subsidy West. But most railroad officers, East and West, were inclined to reserve comment until the issues are clarified.

New York Central's guaranteed rate . . .

on the movement of rugs and carpets between Amsterdam, N.Y., and Chicago has been filed with the ICC. To take advantage of the rate, a shipper will have to guarantee movement of 80% of his tonnage by rail.

A net income gain of $134 million . . .

is estimated for Class I railroads for this year's first seven months. The estimated net is $337 million, compared with $203 million for the first seven months of 1958. The AAR statement also shows July's estimated net as $32 million, the same as that of July 1958. Rate of return for the 12 months ended with July was 3.35%.

A missile launching system . . .

based on specially built railroad cars to gain mobility and other defense advantages has been developed by ACF Industries, and American Machine & Foundry. A model of the missile-launching car at the heart of the ACF-AMF system was displayed for the first time at last week's Air Force Association 1959 "Aerospace Panorama" in Miami Beach, Fla. Like the railroad-missile plan developed by Bethlehem Steel Co. and Paul Hardeman, Inc. (RA, July 6, p. 36), the ACF-AMF plan would use cars that could be placed and fired anywhere on the 225,000 U.S. route miles of railroad.

Comprehensive North-South piggyback service . . .

as part of "an overall plan to link all major southeastern cities with each other and the north by piggyback" has been announced by Atlantic Coast Line President W. T. Rice as beginning Nov. 1. The new service will be made possible by improvements in clearance restrictions in PRR's Baltimore tunnel, which will then permit through connections for the ACL and other roads, including Seaboard Air Line and RF&P (RA, Aug. 17, p. 10).

Chief executives . . .

of the 23 standard railway labor organizations will meet Sept. 28-30 in San Francisco at the conclusion of the AFL-CIO convention. RLEA Chairman G. E. Leighty, whose last press conference produced the threat of a work stoppage (see page 9), will report on the chiefs' actions when he meets the press again on Sept. 30.

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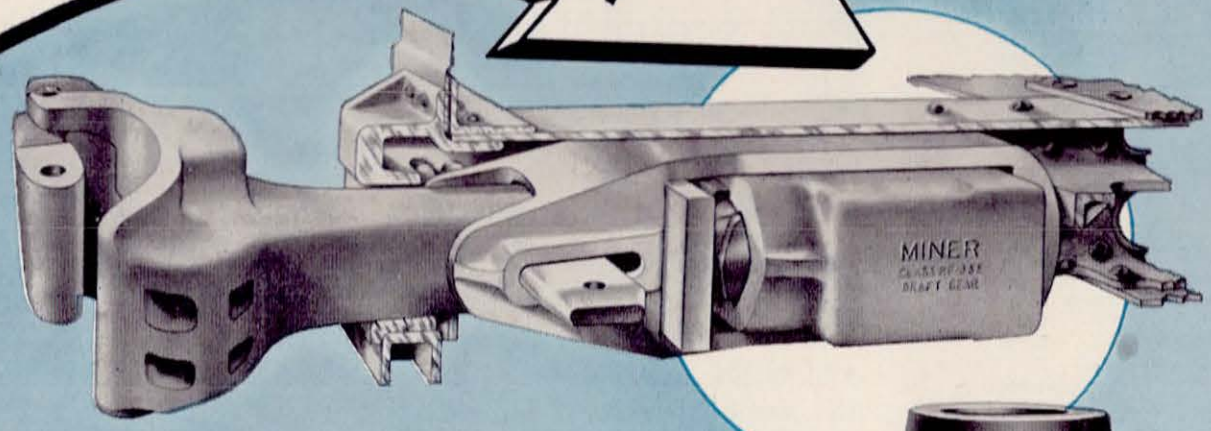

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Non-Ops Ask 25-Cent Increase

► **The Story at a Glance: The wage demand for non-operating railroad employees is an increase of 25 cents per hour.**

Eleven unions representing these employees are also demanding more liberal health and welfare benefits, including a new contract provision for group life insurance.

These demands, served Sept. 1, complete the non-ops' 1959 package, which already contained demands, served May 29, for longer paid vacations and two more paid holidays per year.

George E. Leighty, president of the Order of Railroad Telegraphers and chairman of bargainers for the non-ops, announced the 11-union group's 1959 demands at an Aug. 31 press conference in Washington, D.C.

In addition to the proposed increase of 25 cents per hour, the wage demand is that all cost-of-living increases provided by so-called escalator clauses of present agreements be made permanent and incorporated into the basic rate. These escalator clauses, which the non-ops propose to cancel, have provided raises aggregating 13 cents per hour, and Mr. Leighty said the adjustment due Nov. 1 may provide another two cents. He summarized the proposed improvements in health and welfare benefits as follows:

- Addition of group life insurance coverage, insuring each worker in the amount of the full-time annual earnings of his highest-rated position, with a maximum of $5,000.
- Extension of the same hospital, surgical and medical benefits to dependents as are now provided for employees, except for home and office calls.
- Continuation of protection for furloughed workers and their dependents for three months after their benefits would expire under present agreements.
- Assumption by the railroads, specifically and separately from the payment of insurance payments or hospital association dues, of the cost of all benefits provided by reason of occupational diseases and injuries arising out of or in the course of employment.

Mr. Leighty estimated that these health-and-welfare proposals would cost the railroads the equivalent of seven cents per hour. Thus, the whole proposal would add 32 cents per hour to the non-op wage bill. When he announced the vacation and holiday demands, Mr. Leighty estimated that they would increase the non-op payroll by about 2% (RA, June 8, p. 35). The five unions representing operating employees have also served demands for raises of 12% for engineers, conductors and switchmen, and 14% for trainmen and firemen.

The proposal to cancel the present escalator clauses is part of the non-ops' plan to get away from contracts with moratorium or specific-term provisions. Mr. Leighty pointed out that escalator clauses have always been tied to moratoriums, but he also said the non-ops might consider one if it were not on that basis. They want to return to contracts under which they can serve new demands at any time.

Mr. Leighty said that a Nov. 1 strike is a possibility if railroads generally answer the non-op demands with contentions now being advanced by "some managements" that the three-year moratorium provisions of the present non-op agreement does not automatically expire at midnight Oct. 31.

Some railroad men who keep in touch with such matters said last week that they knew of no railroad which is taking that position. They called it a "new one" on them.

Mr. Leighty nevertheless made it clear that he has heard of such contentions, which hold that the moratorium provisions, like other provisions of the present agreements, remain in effect until successor agreements are made. The non-op leader went on to say that, if such contentions prevailed, the unions would be thwarted in any undertaking to change any provision of the present agreements.

He also said there are specific expiration clauses in moratorium provi-

Import Autos Run 16 to the Flat Car

Katy is using custom-built driveaway trailers and 85-ft flat cars to move small foreign cars piggyback at 16 autos to the carload. The 40-ft trailers are equipped with ramp tracks to fit both narrow and standard axle widths. Katy is hauling the cars under a special import rate (the autos pictured: the road's first shipment of Italian Vesta cars, which were transported from Houston, Tex., to Kansas City, Mo.)

sions of some of the op agreements. To dispose of the issue, the formal notice served by the non-ops contains this paragraph:

"It is our understanding that the restrictions contained in Article VI (the moratorium provisions) of such Agreement of Nov. 1, 1956, and the corresponding provisions of any stand-by or other agreement to accept and apply or make effective the substance of that Article expire by their own terms on Oct. 31, 1959. In the event that you should have any different understanding, please accept this as further notice under the Railway Labor Act that all such restrictions shall be cancelled effective Nov. 1, 1959."

Reaction to the strike talk came promptly from a top management wage negotiator—Theodore Short, Chairman of the Western Carriers' Conference Committee. He said:

"In threatening a strike before proposals have even been presented to the railroads, Mr. Leighty appears to be more interested in force than in negotiation. This take-it-or-leave-it attitude hardly seems the proper atmosphere for calm bargaining. Railroad management believes the public wants to avoid, not precipitate, a rail crisis. Management expects to abide fully by the Railway Labor Act which is set up specifically to settle these questions, and certainly such threats at this time are premature."

If the moratorium issue is not raised by the carriers, Mr. Leighty indicated that a strike threat might still result from the wage and other demands. He would not expect such a crisis until after the first of next year—when Railway Labor Act procedures will have had time to run their normal course.

The non-op leader expects a real fight. That's because he has this view of management's attitude:

"They think they have the public behind them and they're going to resist all they can. The fact that they are making more money than ever means nothing. They want to get it all. They seem even more adamant than management in the steel industry. They think they have the public on their side and that everyone thinks they're broke."

As to railroad earnings, Mr. Leighty had figures indicating that the average annual net income for the 38-year period from 1920 through 1958 was $499 million. He compared this to the net of $601 million reported for 1958, which he said management called a "bad year." And he also said he has never heard a "bigger bunch of malarkey."

Mr. Leighty's tongue-in-cheek comment on management's strike insurance plan was that the unions should perhaps call a strike so the railroads

(Continued on page 40)

Watching Washington *with Walter Taft*

• **SEA-LAND RATE STRUCTURE,** designed to sustain water carrier service in the Atlantic-Gulf coastwise trade, will remain in effect if the ICC adopts recommendations of Examiner Charles E. Morgan. Brushing aside protests of competing railroads, the examiner has recommended that the Commission find "just and reasonable" some 450 joint water-truck rates which Pan-Atlantic Steamship Corp. and 250 participating motor carriers put in effect more than a year ago.

THE SEA-LAND RATES are published for so-called "fishyback" service—a coordinated operation in which truck trailers are transported over both highway and water portions of the through routes. The rates apply from, to or between points in 15 eastern seaboard and southern states.

COST EVIDENCE in the case indicates that Pan-Atlantic's operating expenses for the sea-land service are from $10 to $12 per ton less than the costs of its break-bulk operations. The same evidence led the examiner to advise the Commission that most of the rates he would approve cover fully-distributed costs, and that all of them cover out-of-pocket costs.

LONG-RANGE IMPLICATIONS of his recommendations are visualized by Mr. Morgan. "From the standpoint of competition between the several modes of transportation," he says, "the rate pattern which may result from these proceedings, also may have considerable bearing in connection with the possible resumption of services by other coastwise water carriers which have not resumed operation since World War II."

SOME COMFORT for protesting railroads is found in the examiner's comment on differentials. The railroads urge that no order prescribing differentials between the sea-land rates and all-rail rates be issued—regardless of whether the sea-land rates are cleared or condemned by the Commission. The examiner emphasizes that his recommended findings are not intended to include any prescription or approval of specific differentials or relationships.

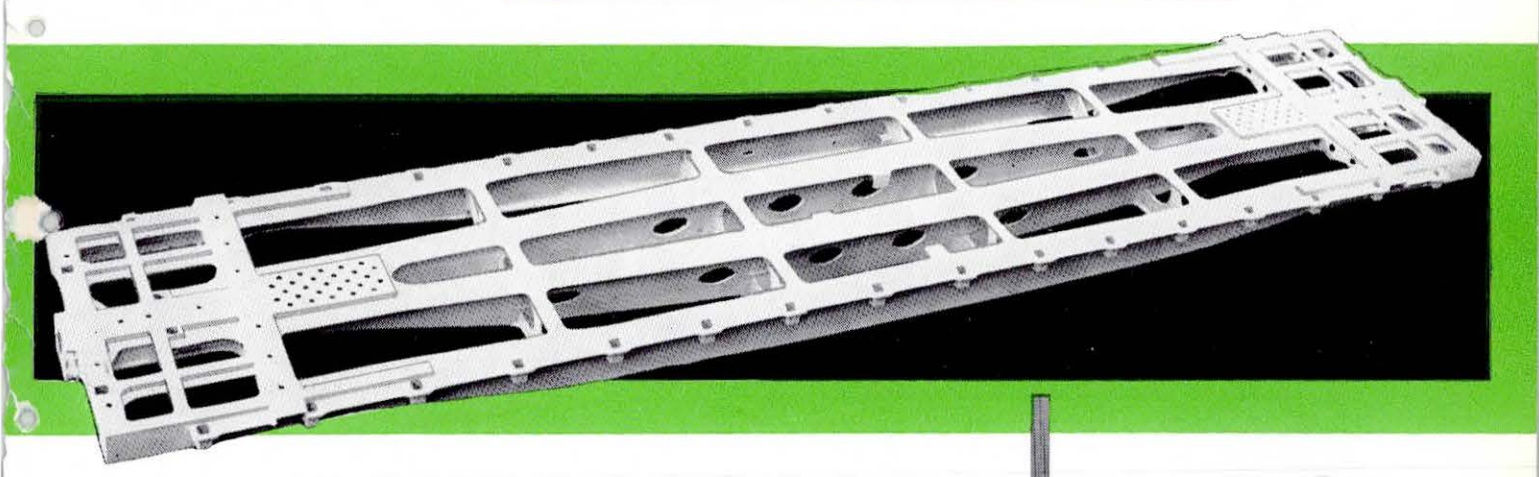
• **THE "CONSIDERED OPINION"** of the chairman of the Senate's Republican Policy Committee, Senator Bridges of New Hampshire, is that the Transportation Act of 1958 has not accomplished its purpose. The Senator expressed this view last week in a speech to the Senate. He called for Congressional check on how the 1958 Act is being administered, and prompt enactment of whatever additional legislation is needed to help solve railroad problems.

THE RECENT TREND of railroad earnings is considered "alarming" by the Senator. It indicates to him that, if business generally levels off again, the railroads "will be back on our doorstep in need of assistance," and the Congress "will be confronted with the question as to why our Act of 1958 has not brought results."

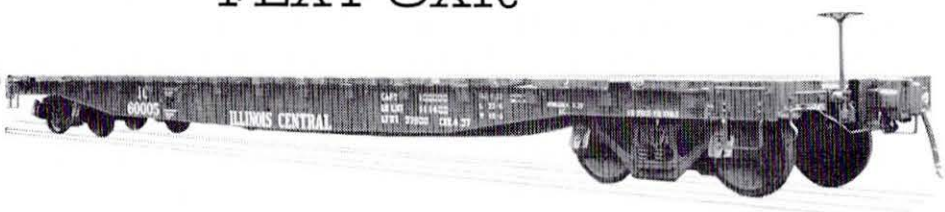
THE SENATOR THINKS it's about time that "high-sounding phrases" about helping the railroads were translated into positive action. Unless that is done, he warns, the country will have to spend "untold millions" supporting the carriers, or face government ownership. "May God spare us that result," he prays.

...where railroad progress is cast in steel

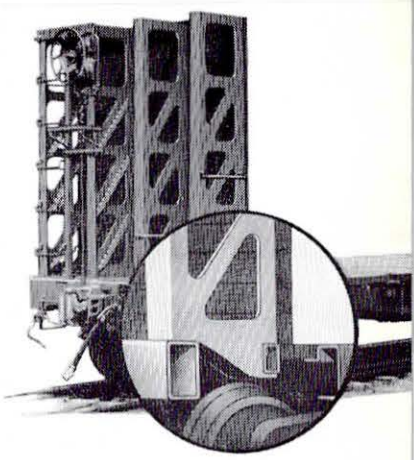
A General Steel Underframe gives you TWO CARS IN ONE



FLAT CAR



BULKHEAD CAR



General Steel End Posts are quickly and economically applied —interlock securely without space consuming braces.

Many progressive railroads are profiting from the "two-cars-in-one" advantage provided by one-piece underframes of General Steel design. Flat cars built with these maintenance-free underframes are easily converted to bulkhead cars by the application of cast steel upright ends.

All standard General Steel underframes for flat cars are designed to accept the interlocking end posts, and through the proper distribution of metal where it is needed for strength, they have the *extra strength* required when used with bulkhead ends.

Build with double-duty General Steel underframes. They're your best investment, by far.

Visit General Steel Displays at the ARSA Convention
Booth 160-61 and Track No. 8

GENERAL STEEL CASTINGS

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FOR STRUCTURES...
MODERN
concrete

Building columns were placed outside masonry walls to provide unobstructed interior.

B & M's new Budd car servicing shop:

Low maintenance cost guaranteed... it's built top to bottom with modern concrete!

The job called for maintaining rolling stock, not buildings. That's why the Boston & Maine Railroad chose concrete all the way—floor, walls, roof—for servicing their RDC fleet. It's as maintenance free as you can make a building. Fire resistant, too.

The prestressed concrete roof girders were chosen for their high load-bearing strength. They support the monorail-mounted sand hoppers and a 10-ton sand storage tank, as well as the normal roof load.

The use of prestressed concrete increases daily on railways—not only for buildings but for towers, bridges, structures of all kinds. With prestressed concrete, count on minimum cost and quick erection.

PORTLAND CEMENT ASSOCIATION

A national organization to improve and extend the uses of concrete

Transport Aid up to N.J. Voters

Help for New Jersey suburbanites facing possible loss of rail commuter service is in the hands of the electorate now. The state Senate has voted 17-1 to approve a bill calling for a statewide referendum on Gov. Robert E. Meyner's transportation-aid plan. The state's lower house had approved the bill earlier, by a 53-2 vote (RA, Aug. 17, p. 32).

Governor Meyner, who with State Highway Commissioner Dwight R. G. Palmer suggested the plan for diverting surpluses from the New Jersey Turnpike to aid other forms of transportation, signed the bill promptly. With the next step dependent on public support of the referendum Nov. 3, Governor Meyner indicated that he would help form a citizen's committee to stress the importance to the state economy of providing some form of aid to commuters.

State Hires Publicists

A public information consulting firm has also been hired by the state to see that the public is fully aware of the issues involved in the referendum. Although the size of the majorities in the Assembly and Senate should indicate widespread support for the bill, some Senators who voted for the bill last week expressed concern that the referendum might be voted down if the public thought of the bill only as a "rail-relief" measure.

Although details of the kind of aid that might be given are vague—and in any case will require further legislative approval—one form of relief often mentioned would be to cut taxes on rail property, now proportionately much higher in New Jersey than in any other state. Although the Meyner-Palmer Plan proposes to reimburse communities that suffer tax losses, the tax-relief proposal is expected to draw heavy opposition to the referendum in Hudson County, the populous Jersey City-Hoboken area that levies the largest share of the state's rail tax receipts.

Other forms of assistance that might help solve New Jersey's mass transportation problem—all built around the concept that the state's goal is to move people and not just vehicles—have been mentioned. These include a grade crossing elimination program, aid to bus lines, and grants to railroads to purchase new passenger equipment and to make possible some kind of coordinated service to New York. At present, the nine railroads bringing Jersey travelers to New York use eight different terminals, although travelers are generally bound for one or the other of the two major business areas in the city, Midtown or Lower Manhattan.

If the referendum is passed Nov. 3, it will permit the state to place its credit behind $430,000,000 in Turnpike bonds outstanding. Before this can take place, two-thirds of the bondholders will have to agree to turn over to the state surplus funds that the toll road will earn in the next 28 years. Most authorities agree that $29,000,000 is now available from this source, but estimates of money available for diversion in the future have varied widely, from $132,000,000, to $670,000,000 with latest figures ranging between $420,000,000 and $540,000,000. In any case, only part of the money available would be used to aid rail commuters.

"The Referendum Act is the first step," President E. T. Moore of the Jersey Central Lines told a civic group in Belmar, N. J., "toward a reversal of the rapid trend toward complete disintegration of facilities for rail passenger transportation in this state."

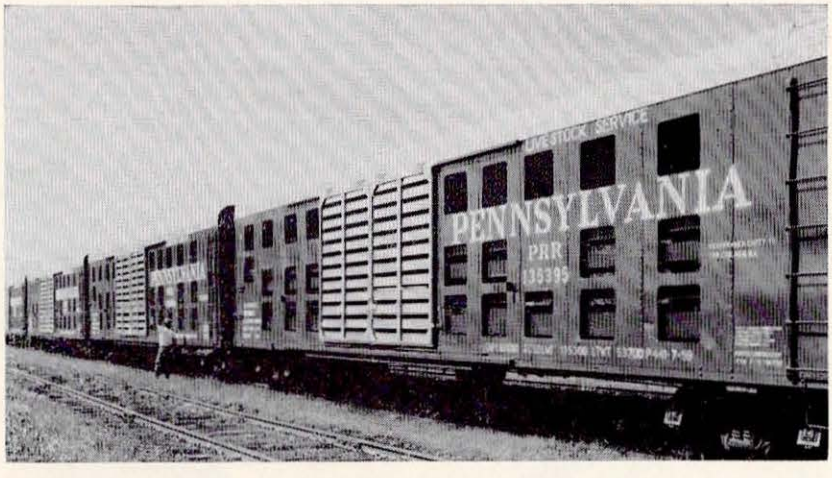
"The plan," Mr. Moore declared, "is in no way designed as a 'handout' to 'save the railroads' or to 'solve railroad problems.' Its purpose, clearly and solely, is to save commuter transportation, and to protect the state against the economic disadvantage inherent in further deterioration of essential rail passenger service."

"If the residents of New Jersey . . . need and want rail commuter service," Mr. Moore said, "they should take advantage of this opportunity to do something about it on Nov. 3."

Southern Would Maintain Existing Interstate Routes

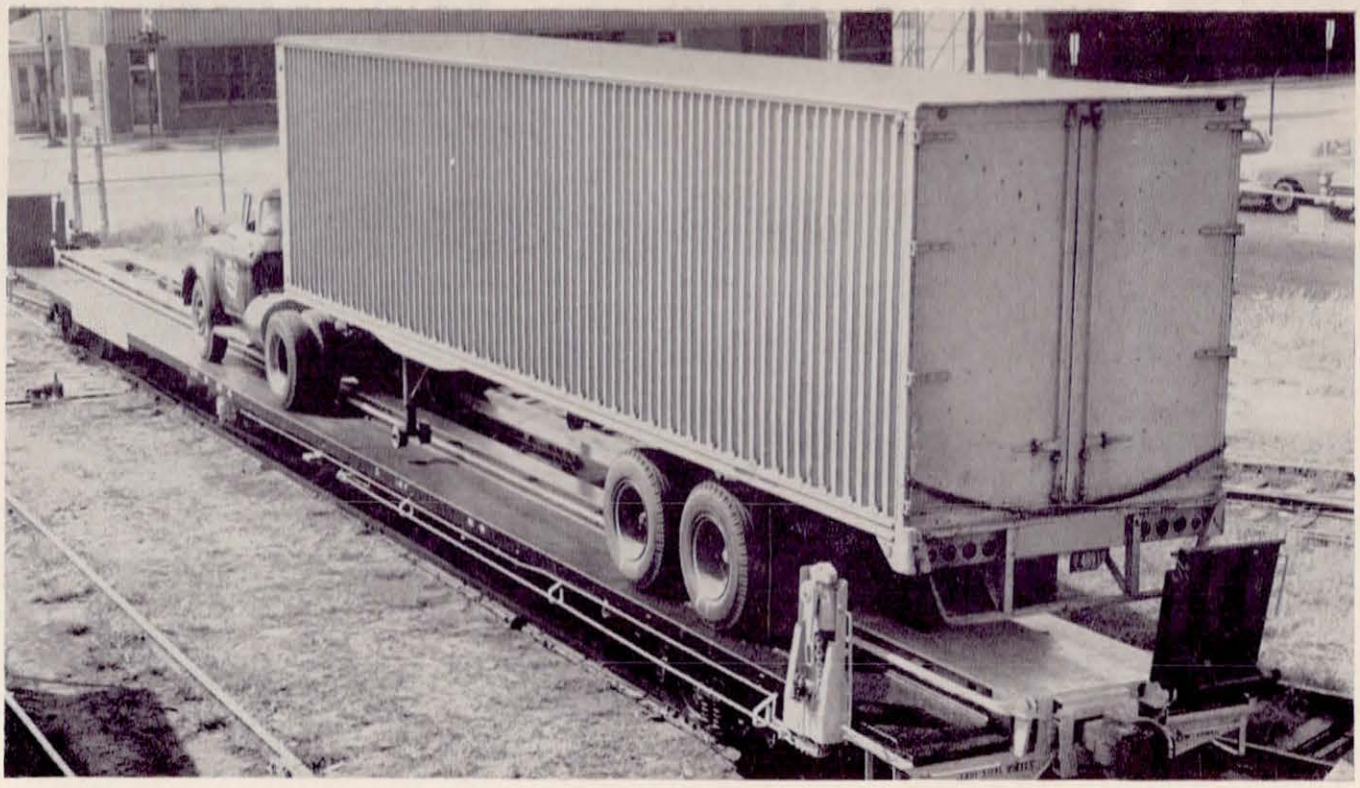
As part of its bid to acquire the 87-mile Interstate Railroad, the Southern has announced its willingness to preserve existing routes and divisions of traffic on the coal road. Southern President Harry A. DeButts said his road, if it acquired control of the Interstate, would keep open "all routes and channels of trade via existing junctions and gateways, and all divisions of traffic moving over the Interstate now in effect."

The Louisville & Nashville, which is also seeking control of the Interstate (RA, Aug. 24, p. 29), had stated earlier that Interstate "forms a natural link between the L&N and the Clinchfield . . . Acquisition of the Interstate by the Southern Railway would place it in a position to impede and hamper service by the L&N, Clinchfield and their connections."



'Cattle Pullmans': 20% More Steers

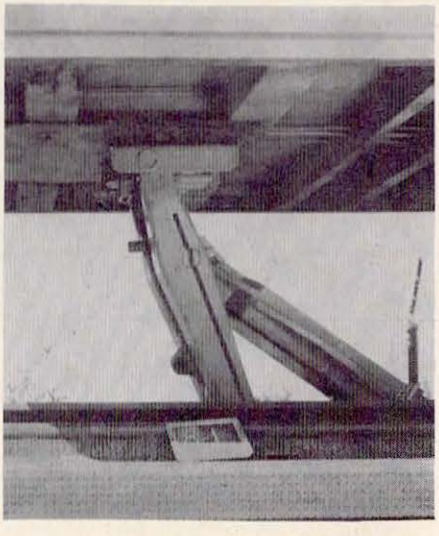
The Pennsylvania Railroad is converting 100 former automobile parts cars into windowed stock cars with aluminum-coated roofs designed to minimize discomfort and loss of weight to livestock carried in them. The road says the all-steel cars can carry 20% more steers than conventional stock cars. Wooden rub rails half way up the insides afford further protection for the livestock (RA, Aug. 24, p. 27).

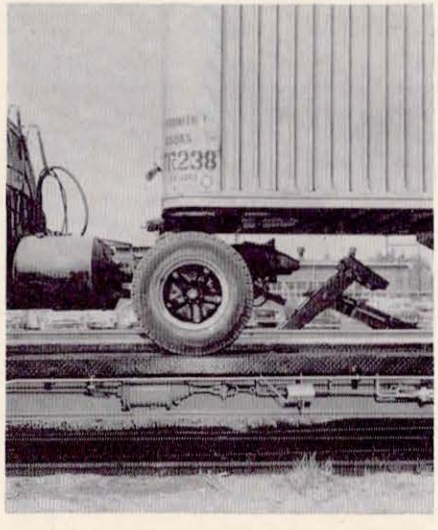


NEW CLEJAN PIGGYBACK CAR can handle either specially equipped or run-of-the-highway trailers. A combination of a new hitch, the regular Clejan-type center sill and new runways, does the trick.

G-85—TOFC's Most Versatile Car

GATX has come up with a Clejan piggyback car—plus. It takes any type of highway equipment, including containers. It saves dead weight, permits bigger trailers. And it can be loaded and unloaded with only one man.





HITCH AT REST (left), shows detail of how trailer is fastened to car. Hitch at impact of 7 mph (center), shows shock-absorbing mechanism in action. Tractor operates hitch via hook as it pulls away from under trailer (right). Driver needn't leave cab. One man to raise or lower the inter-car bridges is the only other manpower needed.

A universal piggyback car which combines the flexibility of a standard flat with the loading speed of the Clejan system has been developed by General American Transportation Corp. A prototype of the car, now undergoing final tests, will be displayed in Chicago at the Allied Railway Supply Association track exhibit this month.

Bridging an important gap in equipment design at a time when piggyback is both expanding and standardizing, the car can:

- Carry any standard highway trailer, whether or not it is equipped with Clejan attachments;
- Move specialized highway equipment, such as automobile carriers and furniture vans;
- Handle a broad array of containers, either on or off their chassis, without overhead cranes, lift trucks, or other special dock equipment;
- Be operated in complete compatibility with all other types of piggyback cars.

General American has temporarily designated its new car the G-85. Basic to its design is a broadened application of the Clejan principle—a center sill which forms both the main structural member of the car and center rails which guide trailers or containers into place. GATX will continue to offer its existing Clejan car, (now designated the R-85), as an economy model or for use where a high degree of "Clejanization" of highway equipment has been achieved. Both cars are 85-ft long, although other lengths can be built at buyer's option.

The new G-85 car has runways for the tires of trailers not equipped with Clejan attachments. It also has standard Clejan rails for trailers and tractors which are so equipped. Both Clejan bridging rails and standard bridging ramps are installed at the ends of the car.

The real key to the car's versatility, however, is a trailer tie-down hitch of new design which is part of the standard Clejan shock-absorbing mechanism. All tie-down operations can be performed from the tractor cab, in a "flying transfer," releasing men who would otherwise be needed to attach chains and jacks to raise the hitches. The only man needed on the ground is one person at arrival or departure of trains to operate the bridges between cars.

The hitch is raised by a hook on the tractor, and is retracted by gravity when two locking plungers are released. In pulling away after spotting a trailer on the car, the tractor automatically lifts the hitch to a positive connection with the trailer's kingpin. In backing beneath the trailer when picking it up, the tractor releases the plungers, allowing the hitch to retract and the kingpin to be secured in the kingpin plate.

The G-85's hitch retracts fully to a position below the car's center sill, permitting containers equipped with flanger rollers to be loaded without interference. Containers and automobile or furniture vans not equipped with standard kingpins can be secured to clamps which are integral with the shock absorbers. As with the R-85 car, the G-85 provides some 10 in. of shock-absorbing movement in each direction at each tie-down. In tests, the G-85's hitches have safely withstood impact tests of 9½ mph without damage to trailers or lading.

Roads which have high piggyback volume, or captive movements in which trailers can be equipped with Clejan "dollies," can achieve even faster loading and unloading. Trailers then would ride to their tie-down spots off their own wheels, with the dolly rolling on the car's center rails.

GATX feels that Clejan-type loading techniques more than pay for themselves in savings in tire and trailer axle bearing wear and in reduced loading time. The G-85 car, however, can take any trailer, equipped or not. Nor does the tractor have to be equipped, although movement along a string of cars is expedited if it is.

Clejan's G-85 car is some 10,000 lbs lighter than the lightest of other 85-ft piggyback cars. Its construction permits a payload weight of 150,000 lbs. And because of its center-sill construction, trailers ride 6 to 8 in. closer to the track.

Moreover, the center guide principle permits loading of wider than normal trailers. There are no side rails to limit trailer width. GATX has found, besides, that a center guide makes for easier backing of non-Clejan trailers along cars than do side guides.

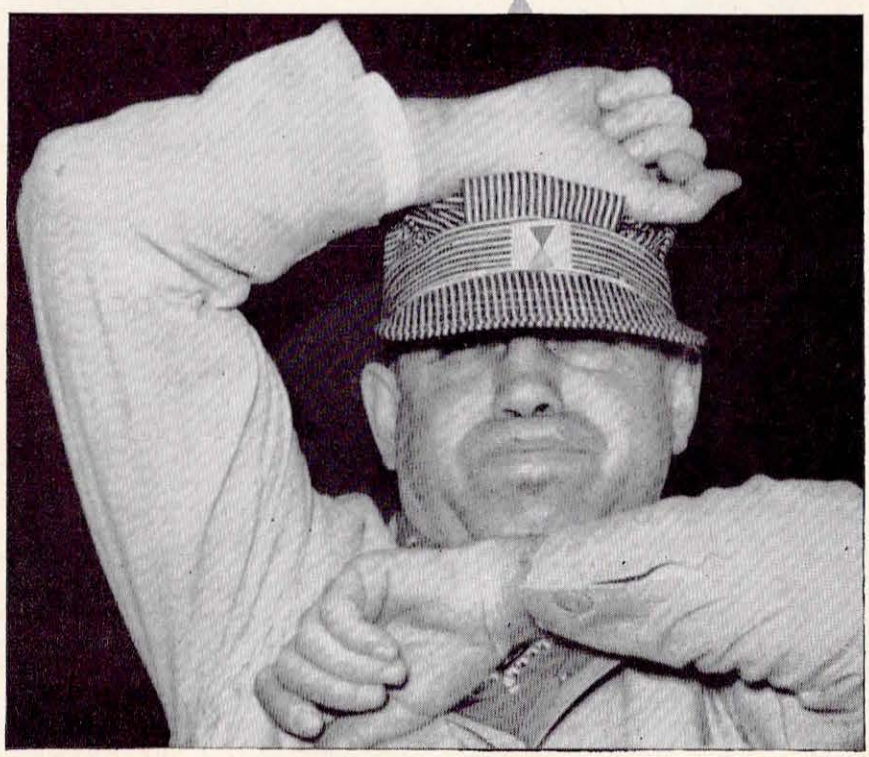
The car is all steel. The wheel runways are of special monocoque construction. The two center-sill I-beams are 39⅛ in. apart, a distance predicated on the space between trailer springs, and standard on Clejan cars throughout the world.

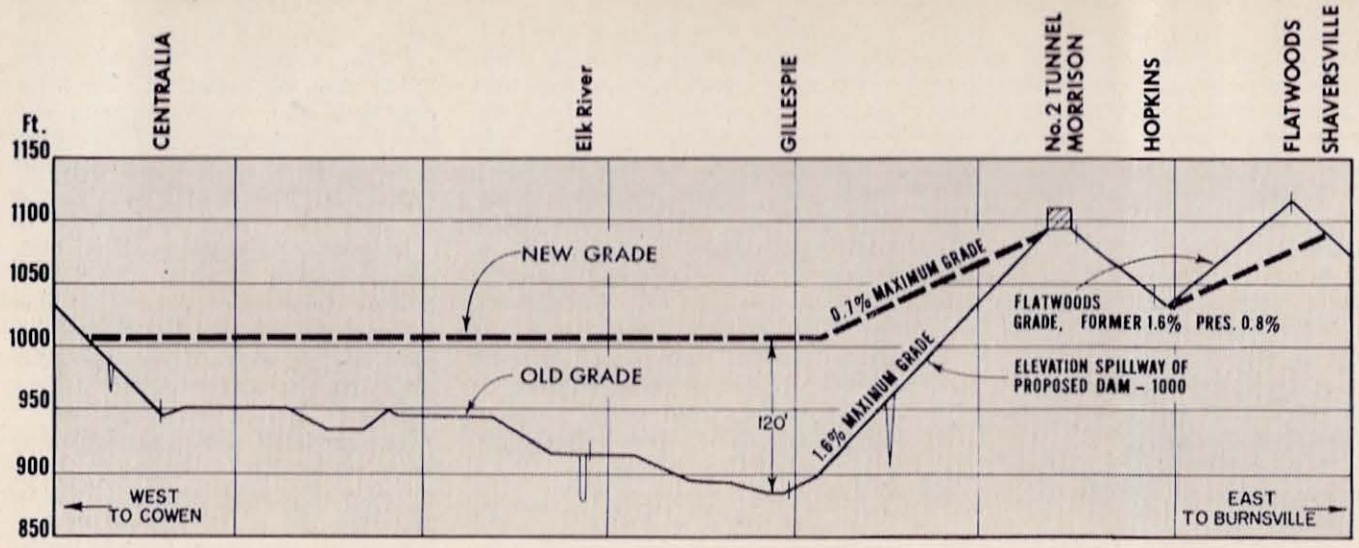
As will all 85-ft Clejan cars, the G-85 will carry two 40-ft or four 20-ft containers equipped with proper flanged rollers. If a third hitch and shock absorber is added, the G-85 will handle three 27-ft trailers. Trailer tie-down differs on the G-85 car in that the kingpin hitch is used instead of hooks which grasp the dolly between the trailer's wheels.

SHUT YOURSELF IN!

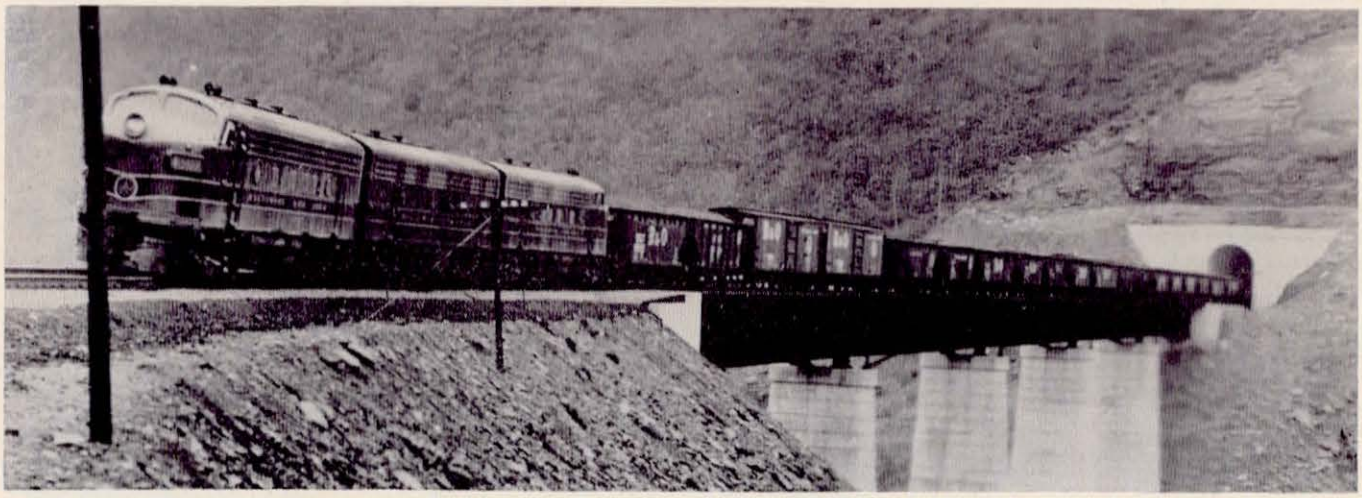
Railway Age for Sept. 21 carries a twelve-page message of vital importance to the railroad industry from Alcoa.

Aluminum Company of America





B&O Upgrades Dam-Flooded Line



NEW TUNNEL, 585 ft long, was required to take the new line under the hill where it was necessary to make a turn for the Elk River bridge. The tunnel has a steel and concrete lining providing modern-day clearances.

WHEN U.S. ENGINEERS—flooded out part of a B&O branch by damming West Virginia's Elk river . . .

THE RAILROAD—dug into its own pocket to pay for other major improvements . . .

WITH THE RESULTS—that helper-engine service has been eliminated, and traffic expedited.

Railroad relocation projects at government dams are not always carried out just to raise the line above pool level. A case in point is a recent project of this type on the Baltimore & Ohio, where the railroad added funds of its own to effect improvements in grade and alinement, with resulting substantial operating economies.

It started in the early 1940's, when the U. S. Corps of Engineers began studies for a flood-control dam on the Elk river, a mile above Sutton, W. Va. The Engineers proposed a pool reservoir maximum level at Elevation 970, which would have inundated the B&O's Richwood branch for a distance of 10 miles, from 1½ miles east of Gillespie to one mile west of Centralia.

About the same time, the B&O initiated a program for development of large coal holdings in the Gauley field. The latter comprises the high-grade Sewell Seam on the Gauley river and its tributaries, as well as large acreages in the No. 5 Block, Peerless and other seams. To permit use of heavier power for handling coal trains, bridges were strengthened on the Richwood line between Burnsville, 16 miles east of Gillespie, and Cowen, 18 miles west of Centralia. Also, a yard and engine terminal were constructed at Cowen.

The interest shown in the Gauley field, and investments made by responsible and experienced operators in developing modern mining plants to produce large tonnages, gave promise of substantial yearly traffic out of the field. The railroad realized that savings could be effected in movement of coal from Cowen to Burnsville if the existing 1.6% grade between Gillespie and Morrison could be reduced. The government's plan for a flood-control dam offered an opportunity to secure the major portion of the earthwork needed for the grade reduction.

Studies proceeded intermittently. In 1945, the government adopted a full reservoir pool at Elevation 1000, which was 30 ft higher than the previous elevation. This new pool level placed the old track 85 ft below it at the Elk River crossing and 50 ft below it at Centralia.

Surveys and detailed plans were progressed jointly by the B&O's engineering department and the government. Under date of June 22, 1950, a railroad-government agreement was finally consummated embodying the main terms and conditions for relocation of track within the reservoir area. This covered only 4½ miles, extending from a point west of the Elk River crossing to a connection with the existing railroad about one mile west of Centralia. The government had funds only for this portion, which was completed in January 1952 at a cost of $830,000.

Meanwhile, surveys and plans were progressed for the remainder of the relocation, including the grade reduction between Gillespie and Morrison tunnel. In the latter part of 1950, diesel power was substituted for steam on the Richwood line and a decision was then made to further reduce the proposed grade up Morrison hill to 0.7%. A supplemental agreement was reached with the government for this grade reduction, with the stipulation that it was the railroad's responsibility to bear the cost of one mile of relocation at the Morrison end. This work was completed in July 1958 at a cost of $3,800,000 to the government and $350,000 to the railroad.

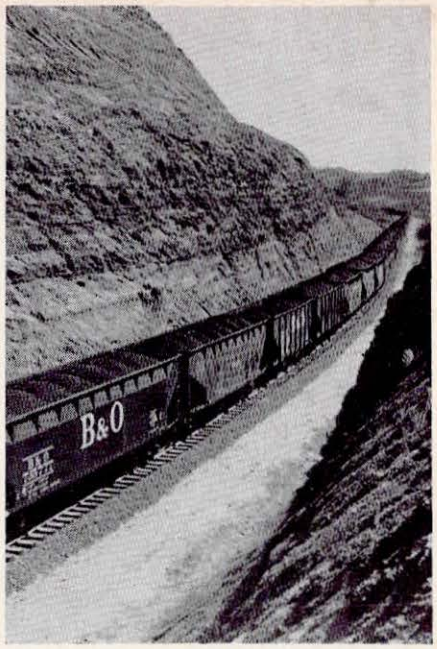
The final stage of the relocation project, including the track laying, erection of superstructures of bridges, grading for a spur track at Centralia, and removal of the old railroad track and structures, was begun in March 1958. It was completed in May, this year, at a cost to the government of $1,400,000.

The new route results in several advantages to the railroad. It is 1.1 mile shorter than the former line. Total curvature is reduced by 295 deg, and maximum curvature to 10 deg. More important, the grade on the new line is level for 7.6 miles, with two miles on a 0.7% compensated grade.

Other construction by the government included relocation of one-half mile of the Central & Webster Springs owned by the B&O, and four miles of the C&WS extending up the Elk river. The B&O later acquired the C&WS as a branch line, which will be used to serve future mining operations in a proven field of Sewell coal.

Full benefits of all the foregoing work could not be realized without reduction of one more ruling grade on the Richmond line. This was the 1.6% Flatwoods grade, from Hopkins to Shaversville, a distance of about 1½ miles. Again, the B&O dug into its own pocket, this time to the extent of $700,000, to revise this alinement and reduce the grade to 0.8%, compensated.

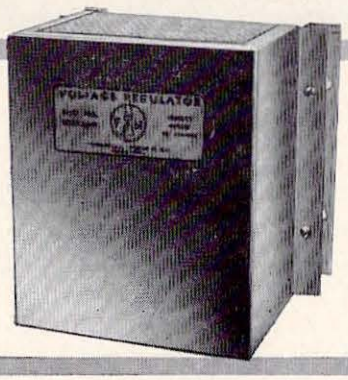
When this work was completed, the road was able to eliminate the need for engine-helper service between Cowen and Burnsville. This has resulted in substantial operating savings, and in expediting the movement of coal to eastern and western markets.



FLATWOODS GRADE reduction required removal of 450,000 cu yd of material from this cut. It has a maximum depth of 150 ft and is 1,500 ft long.

NEW F-M Static Voltage Regulator

DIRT- AND MOISTURE-PROOF



- No moving parts
- Instantaneous precision performance
- Maintenance-free

Maintains output voltage within 1% of setting from no-load to full load. Instantaneous response compensates change in generator speed and load in microseconds. Generator voltage recovery within tenths of a second. No deteriorating effect from maximum field current or ambient temperatures.

Exceptionally compact (9" x 9" x 8" deep). Fits into less space than the now obsolete moving contact regulators. Requires no shock mounting. Contact representative or write Fairbanks, Morse & Co., 600 S. Michigan Ave., Chicago 5, Illinois for details.

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LOCOMOTIVES • DIESEL, DUAL FUEL AND GAS ENGINES • GENERATORS • SCALES
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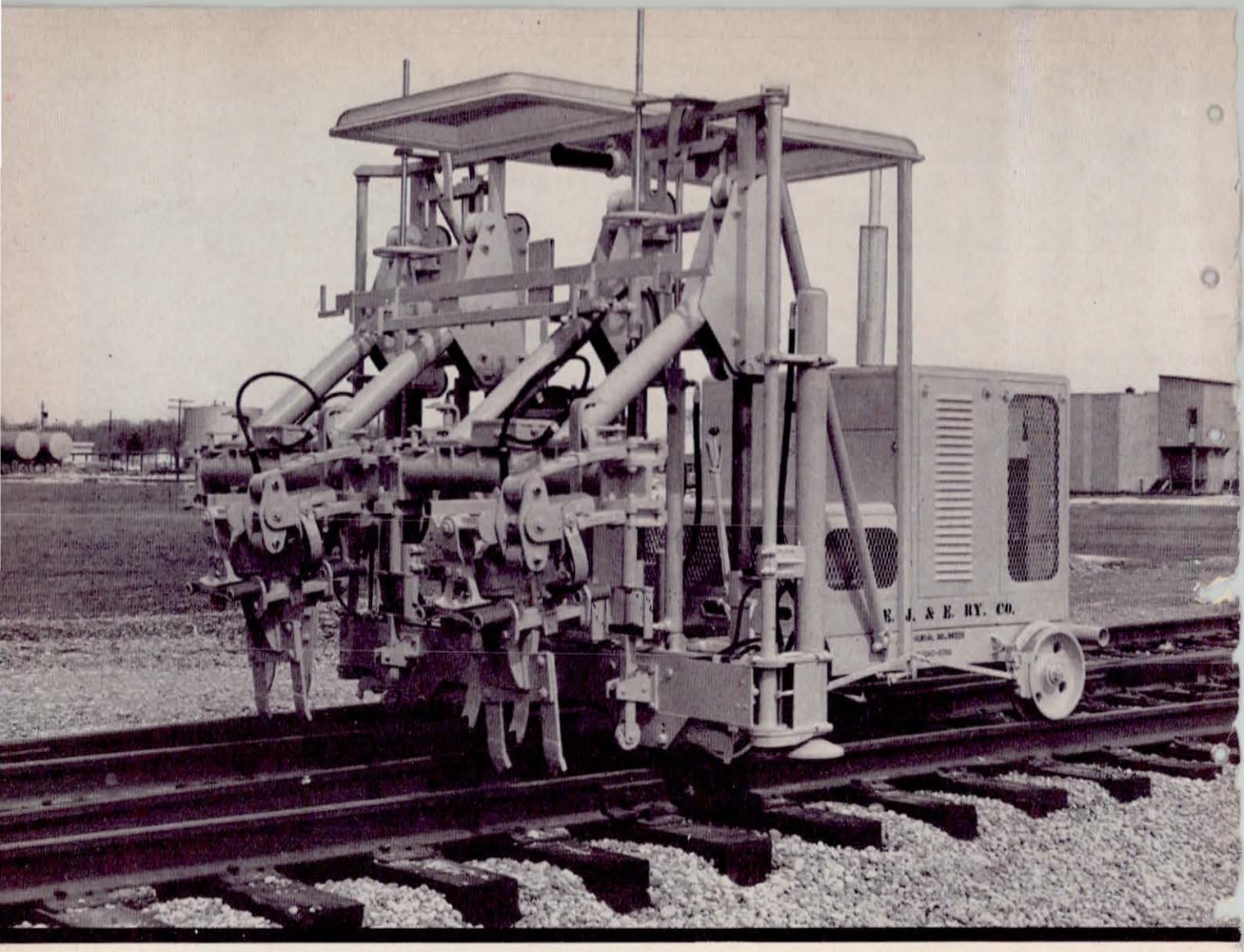


The New JACKSON JACK-SPOT TAMPER

PRODUCT OF INTENSIVE RESEARCH, DEVELOPMENT and TESTING WITH ALL OPERATIONS ELECTRICALLY CONTROLLED and PUSH-BUTTON OPERATED!

IT'S A FAST JACK TAMPER: Jacking to reach and hold track raise and cross level is fast and positive. It quickly and firmly tamps tie to hold raise for production tampers . . . keeps out of their way . . . and it is adapted to existing track surfacing equipment.

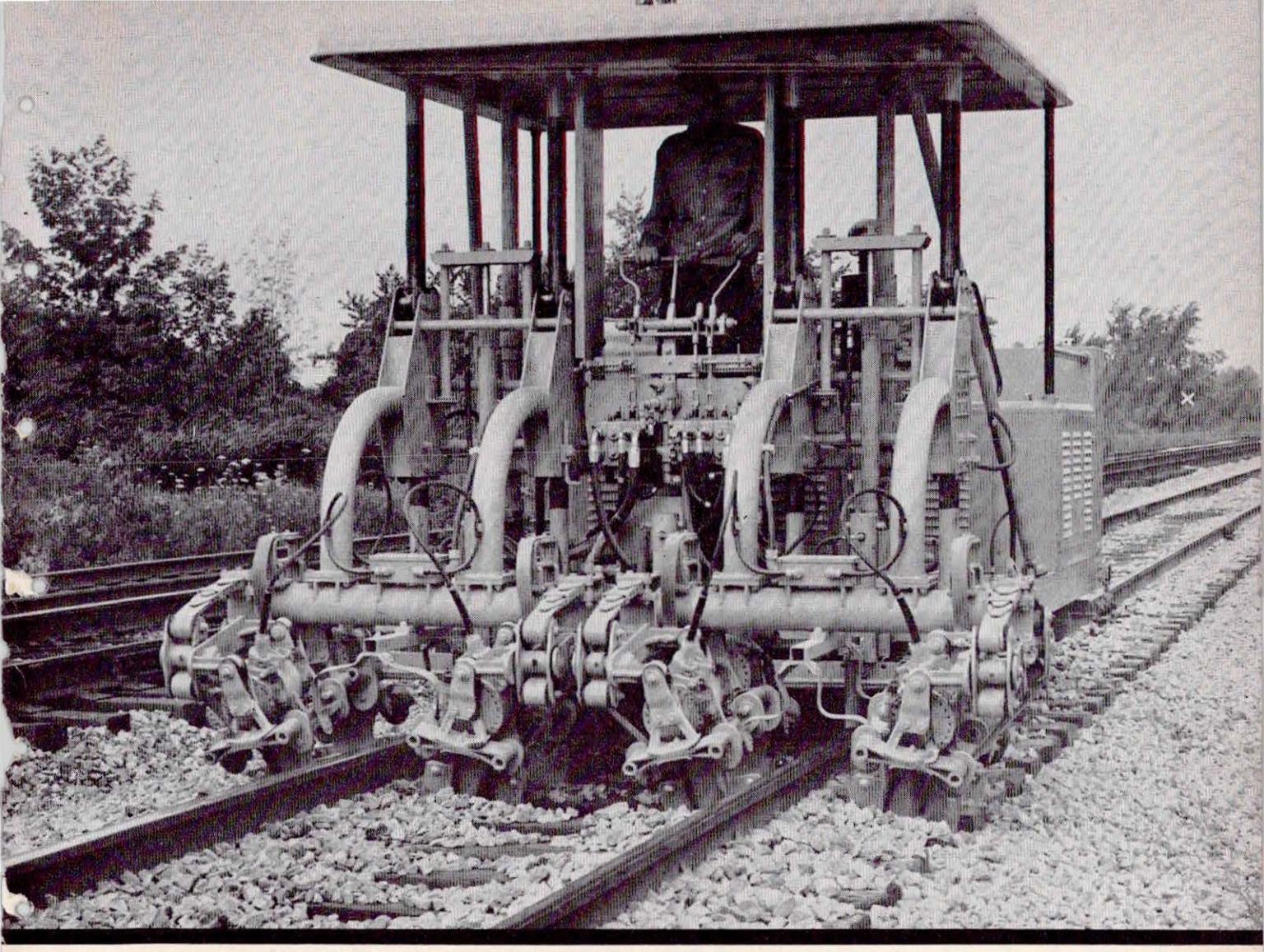
IT'S A MIGHTY EFFICIENT SPOT TAMPER: Great power and speed for spotting and smoothing in all ballasts is supplied by TRACK MAINTAINER tamping units.

IT'S A VERSATILE TAMPER: Produces complete ballast consolidation in out-of-face raises . . . with maximum stability right under the rail — *the load bearing zone.* Replaces JACKSON MULTIPLE TAMPERS in moderate to high raise work. Ideal as an all-around production tamper for those requiring an all-purpose jacking-and-tamping machine. *See it at the show or write, wire or phone for complete details.*

JACKSON VIBRATORS, INC.

LUDINGTON • MICHIGAN

See these 3 OUTSTANDING tamping MACHINES at the CHICAGO SHOW!

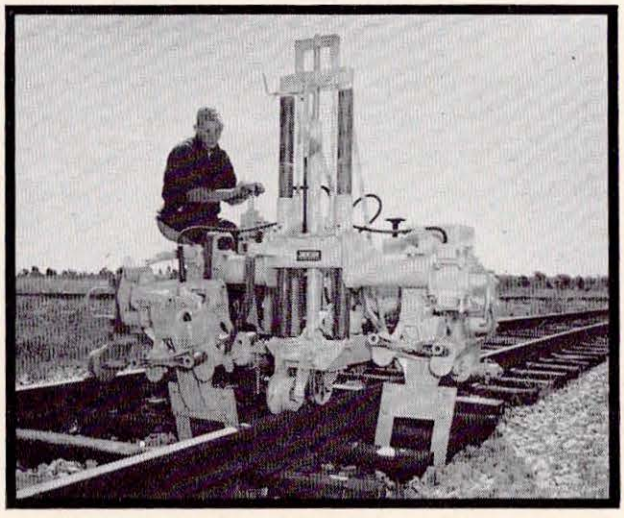


The 1960 JACKSON TRACK MAINTAINER

Don't miss the opportunity to inspect the faster 1960 Model of this production tamper which has won such overwhelming preference as the best, most economical means of both putting up and maintaining track of finest, longest-lasting quality. Write, wire or phone for the facts if you don't get them at the show.

The New JACKSON MONORAIL TAMPER

With POWERFUL "TRACK MAINTAINER" TAMPING UNITS. Another versatile, highly efficient tamper by manufacturers of the world's most successful tie-tampers. Ideal for spotting, smoothing, secondary programs, and all yard maintenance. Traveling from tie to tie and operation of workhead all hydraulically actuated and controlled. Equipped with power ram-turntable for quick transfer to opposite rail. Set-off and trailer equipped for truck towing to widely separated jobs. Inspect it at the show and contact us for complete information.



THE ROAD'S POPULAR RDCs were acquired in straight barter deals with the C&NW and M&StL.

C&O Keeps Its Passengers

The road that made Chessie famous is still trying—deficit notwithstanding—to give its passengers 100 cents worth of value for every dollar they spend on Chesapeake & Ohio transportation.

C&O's approach today lacks the flamboyance of the Robert R. Young era. But what Chessie's passenger program lacks in drama, it's made up (thus far) in results.

Take, for example, C&O's adventures in the used equipment market. Late in 1957, the road swapped three streamlined coaches for a trio of RDCs for which Chicago & North Western hadn't found productive use. C&O spruced up the units, put them in service in April 1958 to replace a conventional train in Virginia. In a full year of operation as Nos. 46 and 47 between Newport News and Charlottesville-Gordonsville, the RDC "ChessieLiners" didn't produce significant increases in passenger volume—until lately. May and June this year, C&O reports, showed "a substantial increase in passengers carried . . . influenced to some degree by special party traffic, but the day-to-day regular travel also had a substantial upturn."

By the end of 1958, C&O had added another pair of RDCs to the roster—these two from the Minneapolis & St. Louis in exchange for 32 70-ton hopper cars. C&O put the units in service last March on its Big Sandy subdivision in Kentucky. The road thinks it's too soon to chart traffic trends—but "in the cost field there is every reason to believe we shall achieve the annual $45,000 savings we estimated when acquiring the cars."

Savings, incidentally, have come in several areas. C&O operates its RDCs with a two-man "engine" crew, a conductor and a baggageman-brakeman. The conventional trains previously operated had both a baggageman and a brakeman. With respect to the Virginia service, C&O has developed "major cost savings" from reductions in shop and service forces made possible by use of the Budd cars. In the beginning, the road had an initial outlay for new maintenance equipment, which brought on heavier per car-mile costs than it anticipated. But, C&O says, "we're hopeful that with most of these nonrecurring costs behind us, we will now operate within the 40-cent per unit-mile maintenance cost originally estimated."

Fare, Meal Price Cuts

Most of C&O's other new ventures in the passenger field have involved selective fare reductions, sometimes coupled with a full train travel package.

The "American Plan" package came first—and C&O has found it to be a "valuable merchandising medium," despite its restrictions. (It's applicable Tuesday-Wednesday-Thursday only; has a six-day return limit; isn't as low-priced as tickets available under family-fare plan.)

American Plan applies between Grand Rapids, Holland, Grand Haven and Muskegon, Mich., and Chicago. The package: Round-trip ticket, run-

of-menu breakfast coupon and full-selection (except steak) dinner menu for the price of the ticket alone. Restricted as it is, American Plan still contributed to a 5% increase in Grand Rapids-Chicago patronage in the first half of 1959, compared with the similar period last year.

On the other half of its Northern region—the Detroit division—C&O put in 10-day-limit round-trip coach fares for 150% of the one-way fare. Overall—including both American Plan route and straight-fare cut route—Northern division coach revenues for first half '59 were up 6% over '58 figures.

Among C&O's other passenger experiments:

- "Chessie Discount Dining," which offers reductions of up to 20% on dining car meals through sale of meal coupons. C&O says the program has accomplished its objective (to overcome coach-passenger resistance to the diner) and hasn't affected per-meal revenues.
- 30-day limit round-trip coach fares at 133⅓% of one-way fare, applicable between all stations south of Detroit.
- Honoring of coach tickets in sleeping cars—specifically, on "The Sportsman" between Charlottesville, Va., and Detroit and intermediate stations.

C&O launched these last two programs late this summer. It's too soon to evaluate either—but early sales have been encouraging.

Railroading After Hours with Jim Lyne

SANTA FE AND KEY WEST—These are a couple of pretty good sized places without regular railroad passenger service. (My thanks to General Superintendent E. D. Jones of the Soo Line for calling my attention to Santa Fe). However, I doubt that it really qualifies as a trainless town, because there *is* a mixed train daily into and out of Santa Fe, and there's excellent connecting bus service to passenger trains at Lamy, only 18 miles away.

A reader too modest to let me identify him nominates Miami Beach as a railroadless city—but trains are certainly as convenient to Miami Beach as planes are. It's not at all like the trainless situation of New Bedford, Mass. (for example).

'FEATHERBEDDING,' 1922—I knew—when I ascribed to the late F. J. Lisman the invention of the term "featherbedding"—that I'd be called quickly enough, if I were wrong. I was. Bob Hicks of the New York Central refers me to page 625 in L. F. Loree's "Railroad Freight Transportation" (first published in 1922; my copy is 1931). Mr. Loree wrote of "featherbed practices" with exactly the same meaning the term now has. Anyhow, this use of the expression did not become current until Mr. Lisman started using it in his widely-distributed Railway Age articles in 1934.

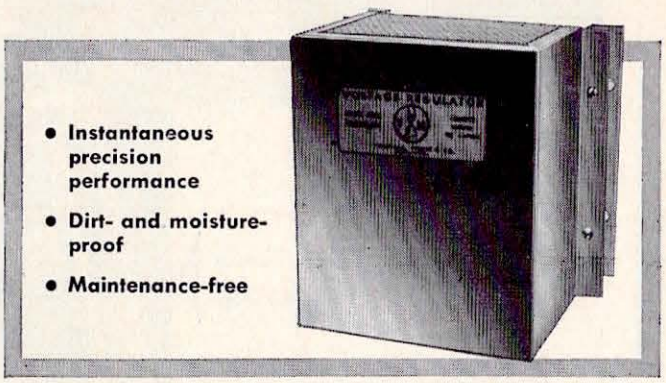
Incidentally, on page 562 in his book, Mr. Loree revealed that locomotive engineers on the PRR in 1873 proposed that conductors' jobs be abolished and their work given to the engineers. Mr. Loree didn't favor the idea—but he did advocate 3-man crews (engineer, fireman, conductor) on light-traffic lines. He saw no need for more than two men in a cab unless the firing was so heavy that an assistant was required. It was the head brakeman, not the fireman, that he considered superfluous.

ONE BIG OP UNION?—I see where Ed Gilbert of the BofLF&E wants all the operating unions to merge. Whatever his objective may be, my own feeling is that such a move might well be in the direction of progress—from the point of view of both employers and employees.

I always found the sharp craft distinction between train and engine work hard to understand—even back in the days of steam locomotives. I have seen trainmasters (whose experience was in telegraphy or clerical work) become competent steam locomotive operators in a short time. And, I'm told, handling a diesel or an electric is much easier (it certainly looks easier). I would suppose a conductor would be a better conductor, if he'd had experience running an engine—and an engineer would be a better engineer for knowing a conductor's work from actually having done it.

NEW F-M Static Voltage Regulator

NO MOVING PARTS



Maintains output voltage within 1% of setting from no-load to full load. Instantaneous response compensates change in generator speed and load in micro-seconds. Generator voltage recovery within tenths of a second. No deteriorating effect from maximum field current or ambient temperatures.

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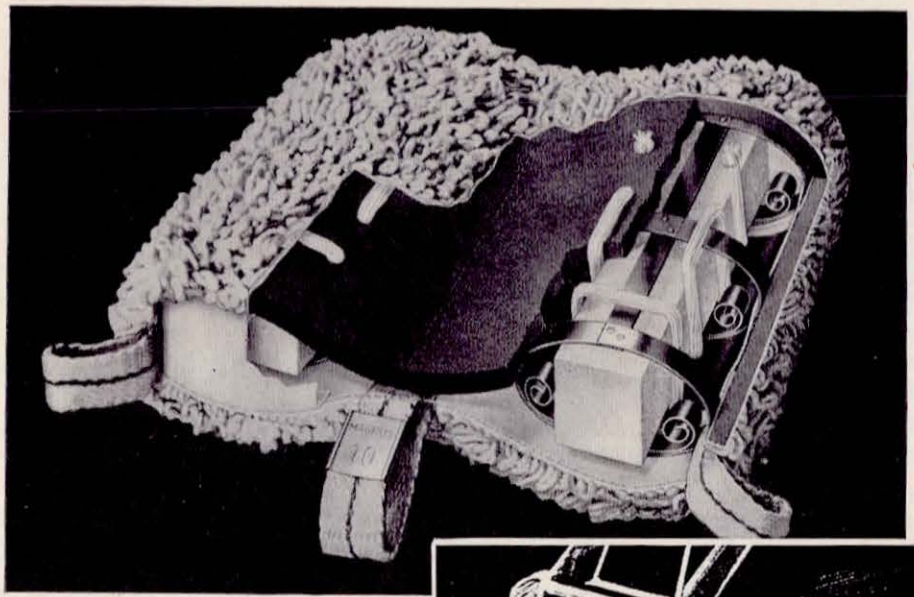
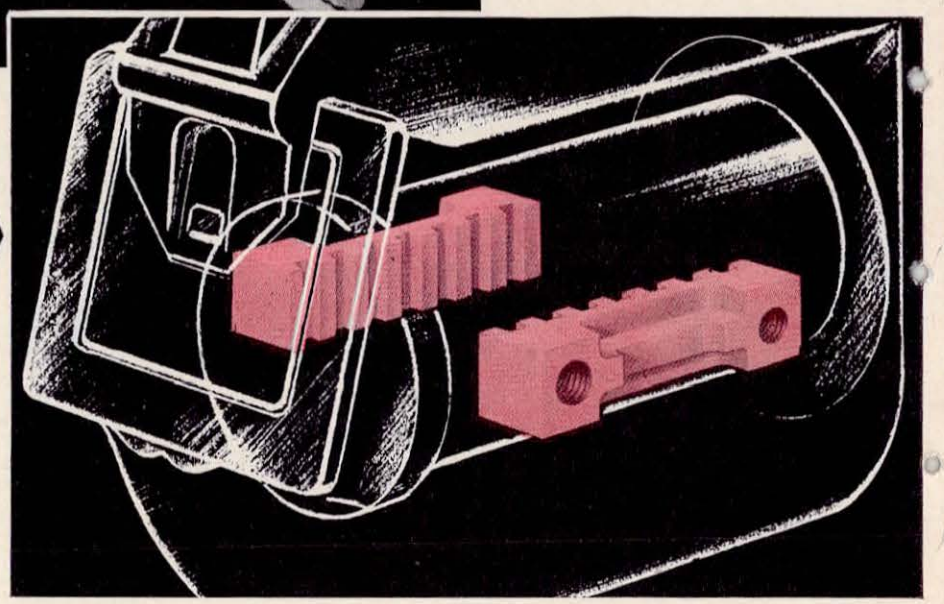


MAGNUS LUBRICATOR PADS

assure an abundant supply and maximum flow of oil to the journal

— three-way wicking

— rugged, one-piece twin-lobe construction



MAGNUS R-S JOURNAL STOPS

stabilize the entire journal box assembly

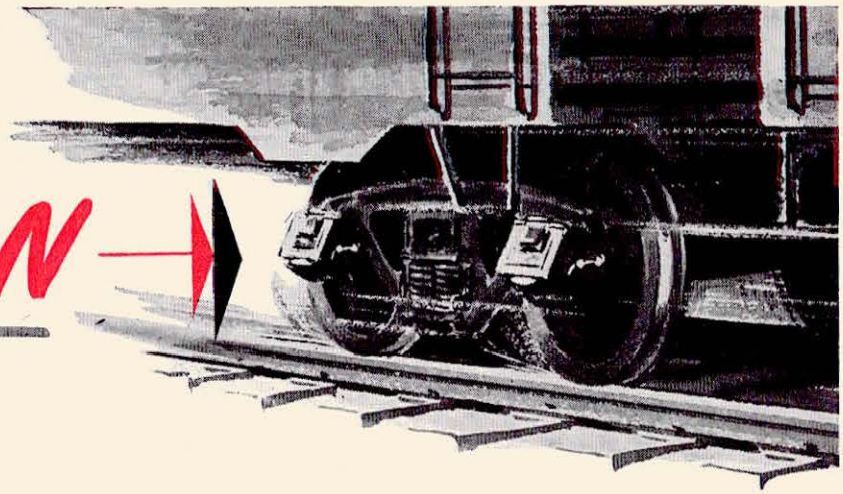
— cut hot boxes 90%

— double bearing life, lower maintenance costs.

MAGNUS METAL CORPORATION *Subsidiary of* **NATIONAL LEAD COMPANY**

SOLUTION

hot box problem



Magnus Lubricator Pads and R-S Journal Stops offer a low-cost combination that eliminates the principal causes of hot boxes — makes it possible to get the kind of bearing performance you want without sacrificing any of the advantages inherent in standard AAR solid bearing assemblies.

Now you can greatly increase bearing efficiency and cut overall costs, too. You can get up to 5,000,000 car miles per road failure of a bearing at the same time you cut the maintenance and service attention required. Best of all, you can do this at a price you can afford to pay — right now. You increase new car costs only 1.25% — and reduce car maintenance costs over 10% — get your money back in less than 3 years. Here's how:

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Step No. 2 — R-S Journal Stops — Engineered and pioneered by Magnus, R-S Journal Stops stabilize the entire journal bearing assembly — give the bearing a chance to work at optimum efficiency. They double bearing and dust guard life, will make possible the development and application of a low-cost rear seal. They are a must to get the maximum safe period between re-packs.

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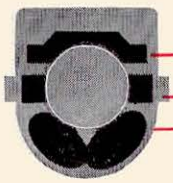

SOLID BEARINGS
R-S JOURNAL STOPS
LUBRICATOR PADS

CLEARED TO PROGRESS
RPI MEMBER

Base Rates on Cost or 'Demand'?

Economist fears there's too much emphasis on making rates at level of marginal (i.e., out-of-pocket) costs. Believes each rate should reflect how much shipper is willing to pay.

By GEORGE W. WILSON
Associate Professor of Transportation
Indiana University

EDITOR'S NOTE.—The point Professor Wilson makes—that rates should take into account shipper's willingness to pay—is valid and important. However, we believe he is unduly concerned lest "marginal cost rate-making" become standard practice on the railroads. Many railroad people have advocated "cost-based rates"—but what most, if not all, of them are talking about is the "floor" to which rates should go where competition is the controlling factor. Where rivals' costs are higher than railroads' (e.g., on heavier loads and longer hauls), we know no railroad people who think rail rates should be held to bare out-of-pocket costs.

In recent years the "gospel of marginalism" has captured the fancy of many transportation economists. These economists believe railroad rates should be based, largely if not wholly, on the "marginal" (or additional) cost incurred in moving an added unit of traffic (whether this unit be expressed in hundredweights, tons or carloads). This point of view appears to have made a deep impression on many railroad people—who believe they should have virtually unrestricted freedom to slash rates to marginal cost.

Supporters of this new viewpoint (as contrasted with the apparently obsolescent "value of service" pricing) generally believe, however, that competition in transportation has become intense and pervasive. If this is true, then railroads would, apparently, be led to reduce rates to levels approximating marginal cost on most commodities between most pairs of cities. Marginal cost pricing would then become as pervasive as, some believe, competition has become.

There can be no question that marginal cost pricing will promote the optimum economic allocation of resources. But there are some practical difficulties in applying this kind of pricing on the railroads. For example, it is generally assumed—in marginal cost pricing—(1) that marginal costs will rise above average costs at a point somewhat before maximum physical capacity is reached, and (2) that those costs which cannot be assigned to specific units of output are relatively small.

Unfortunately, neither of these assumptions holds for railroad transportation. On the railroads, costs per unit of output—both marginal and fully allocated—decline with volume and marginal cost is less than average cost. This means that any rate equal to marginal cost will contribute nothing to "the burden" (i.e., fixed costs and those not readily allocated). The "burden" includes great bundles of **variable** costs which cannot be assigned to specific pieces of traffic. Costs directly traceable to specific traffic are a small fraction of total costs. To urge pricing on the basis of directly traceable costs, without a considerable amount of arbitrary "averaging," runs grave risks of monetary loss—with the further danger of the need for subsidies and even nationalization.

Thus, if profitable private operation of the railroads is the goal, then marginal cost pricing needs to be critically examined. Of course, if railroads would not get a particular piece of business except at a rate well below one yielding a pro-rata contribution toward the unassignable costs, then it would be sound business to quote such a rate as long as it covers marginal cost. But if there are many such rates and competition is vigorous, there will be a deficiency of revenue to meet total costs of the business. Thus, a predominance of low marginal cost rates cannot be maintained in the long run. If the situation of the railroads requires action as drastic as this, then the demise of private transportation cannot be far off. As reasonable profits fail to materialize, the rail plant will be progressively reduced.

In short, over-emphasis on marginal cost pricing appears to accept three mutually inconsistent propositions:

(1) Competition among methods of transportation is intense and ubiquitous.

(2) Rates in competitive areas should be permitted to fall to directly traceable railroad costs.

(3) Private, non-subsidized rail operation should be maintained.

It should be obvious that we cannot have all three of these assumptions. What, then, is the answer if we seek to preserve private operation? The railroads should aim at rates to yield the maximum profit on each commodity. Where competition is vigorous, the "demand curve" for railroad service (i.e., the traffic volumes which shippers are willing to offer for various rates), will be quite close to marginal cost and undoubtedly will be below fully allocated cost. Where competition is less intense, the "demand curve" will approximate more closely to fully allocated costs at some point. Finally, where competition is weaker, the demand curve will be well above fully allocated costs. When each rate is adjusted to the maximum profit point, we will have for each commodity an optimum rate (r) and an optimum volume of traffic (q) for each distance. Total railroad revenue will then be:

$$\Sigma\, rq = r_1 q_1 + r_2 q_2 + \ldots\ldots r_n q_n$$

If this sum covers total costs including normal profit, private operation will be in no danger. If not, there is nothing that can be done short of subsidy or cost reductions, since Σrq is the maximum revenue the railroads can get from shippers.

It is evident, therefore, that marginal costs are an insufficient basis for pricing. Demand must still be taken into account and railroads must be permitted to adjust to the optimum revenue situation manifest by Σrq. This requires "demand oriented pricing," based on careful analysis of marginal cost, plus "what the traffic will bear." If railroads hasten to base numerous rates on marginal cost alone, serious and unnecessary losses will result. Cost analysis alone is insufficient. Demand must be considered too.

While it is true that the rise of alternative forms of transport has had the general effect of lowering the demand curve for railroad service (pushing the value of railroad service down toward cost), this does not mean that demand factors can now be ignored—because

(*Continued on page 29*)

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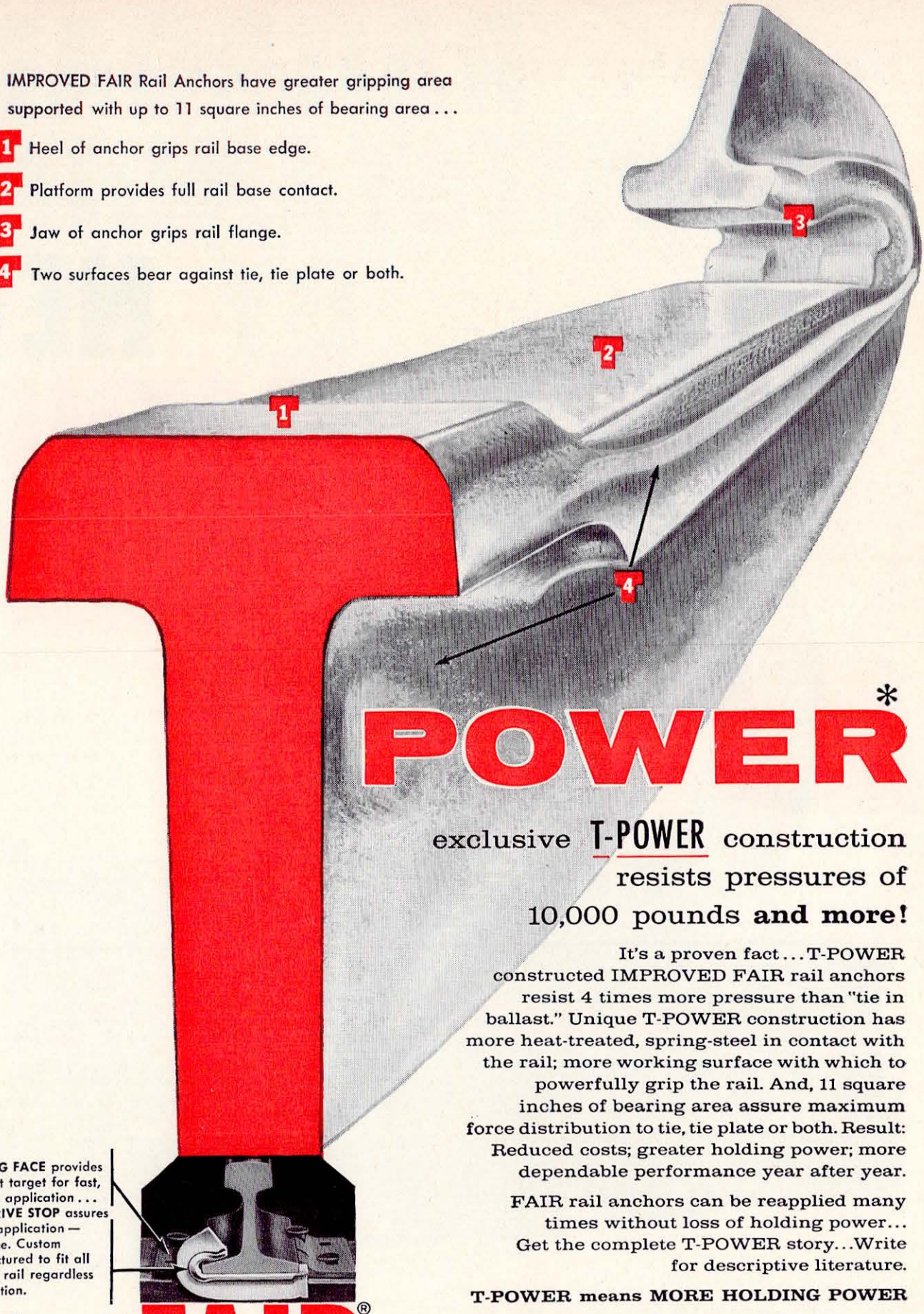

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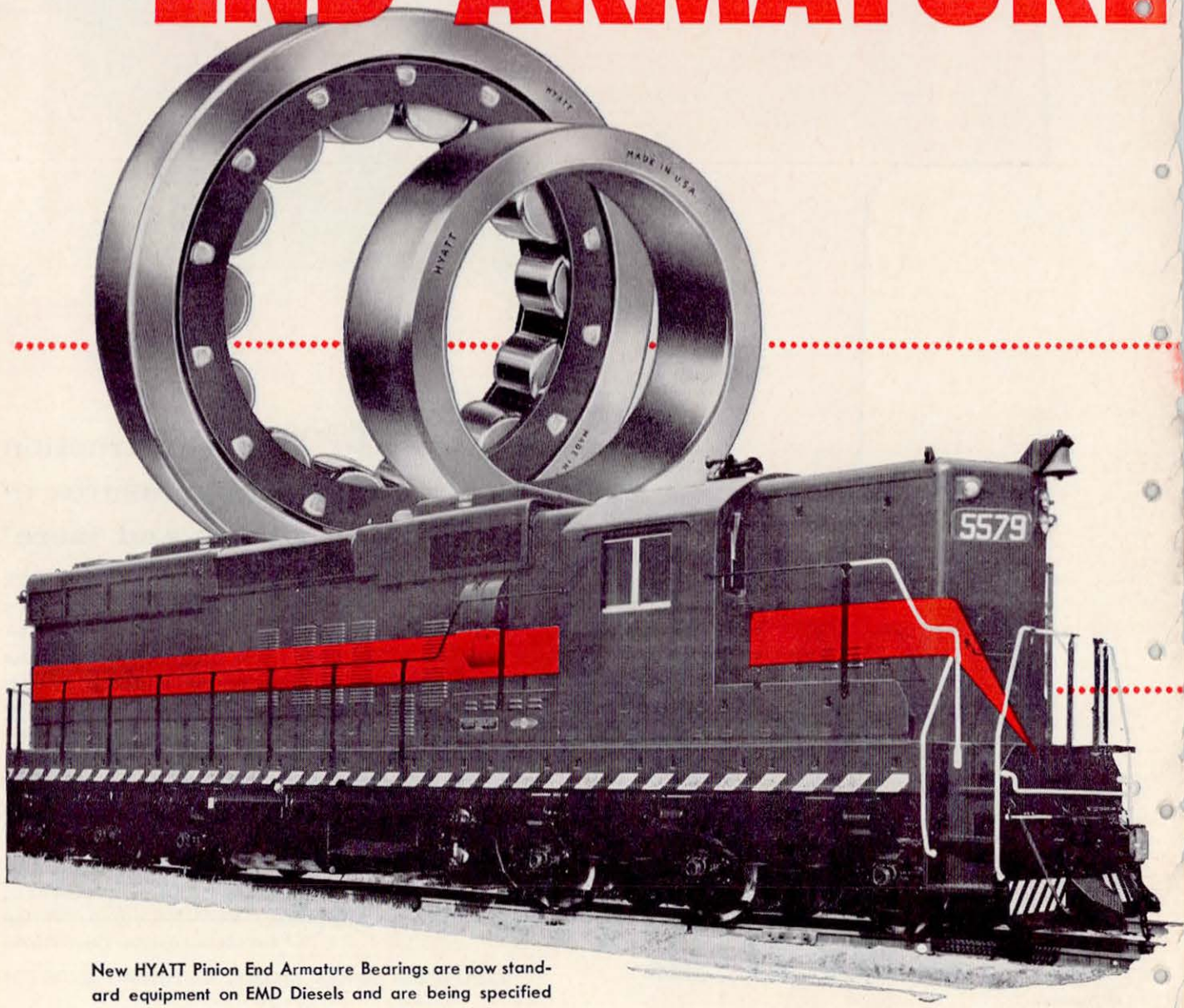
RAILROADS OUTSTANDING BY NEW END ARMATURE



New HYATT Pinion End Armature Bearings are now standard equipment on EMD Diesels and are being specified for replacement by more and more railroads.

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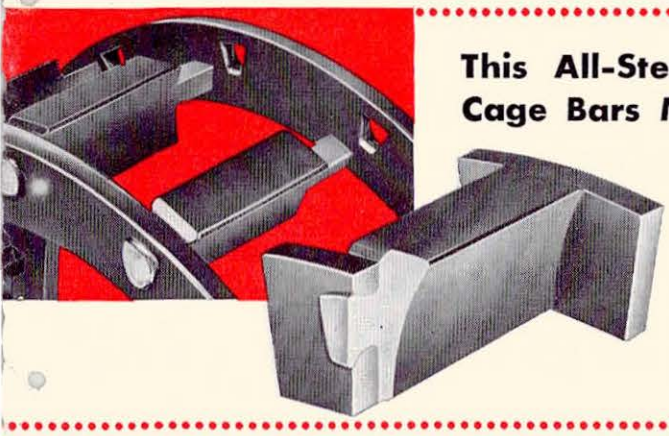

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SIMMONS-BOARDMAN, 30 Church St., New York 7.

You get wide awake readers with Simmons-Boardman Time-Saver magazines

(Continued from page 24)
the rise of competitive pressures is not evenly spread throughout the country, nor for each commodity. Where the demand curve for railroad service has not been pushed down excessively, there remains a possibility of reaping revenue which will more than cover incremental (avoidable) costs, plus a pro-rata share of nonassignable costs, or even more.

Where the demand curve has been pushed below railroad marginal cost, then the traffic should be abandoned. Between these extremes there is a vast variety of situations. It is precisely these which the railroads need to exploit. Thus, in effective pricing of railroad services under contemporary conditions, cost knowledge alone is insufficient—demand factors also must be known. Though demand and cost are closer together than they were in the past, there are still gaps of varying size between them. The railroads need to find these gaps and make use of them.

If the pattern of rates which emerges is found to conflict with other aspects of national policy (such as national defense or opposition to "discrimination"), specific adjustments can and probably should be made. I am merely suggesting here that, from the railroad point of view, marginal cost pricing is exceedingly dangerous in view of the substantial bundle of unassignable costs. The latter must be recovered somewhere. If analysis of demand is not feasible or is ignored, then rates should be based on marginal cost plus some admittedly arbitrary amount. Either that, or railroads will have to be more receptive to subsidies than they are at present.

Full effect must be given to demand, as well as cost, in railroad rate making if the industry is to thrive under private ownership. Indeed, demand needs to be considered more carefully now than in the past.

BAR Impact-Tests Tank Trailers

Results of Impact Tests

TEST NO.	1	2	3	4	5	6	7
SPEED, MPH	5	4	4¾	6	7	7	9
TRAVEL, IN., AT ACF HITCH	2½	2	3	4½	5	to 6	7½
IMPACT ZONE	2¾	2½	2⅞	3¼	3½	3½	3⅞

Before it piggybacked its first gasoline-loaded highway tank trailers last July 1 (RA, July 13, p. 42), the Bangor & Aroostook conducted careful impact and road tests.

Impact tests were made at Caribou, Me., using BAR piggyback car No. 401 equipped with an ACF retractable hitch and safety chains. This 42-ft 2-in. car has a light weight of 43,200 lb. It was loaded with a 35-ft tank trailer made by the Heil Co., having a light weight of 10,000 lb and capacity of 5,150 gallons. For the tests, the trailer's front and rear compartments were filled to capacity; the center compartment was filled to the lower seal with water. The contents weighed 42,200 lb. An impact recorder was installed on the floor of the car.

The loaded car was switched into a stationary string of freight cars with brakes released. Results of seven tests at six different speeds are shown in the accompanying table. One additional test was made by switching a string of freight cars into the stationary loaded piggyback car with brakes released. At an impact speed of 5½ mph, the ACF hitch travel was 4½ in.; the impact recorder registered Zone 3.

Observations showed: (1) The piggyback car's draft gear went solid at 7 mph. (2) One safety chain broke in Test No. 7 because of an improper hitch. (3) There was no apparent damage to the car or tank trailer.

Impact test conclusions: Equipment used under similar conditions will safely withstand impact speeds of 9 mph.

Road tests of the loaded car were made in northbound Train No. 57, Caribou to Van Buren, and southbound Train No. 58, Van Buren to Oakfield. The equipment was the same as used for the impact tests. An empty flat car was placed between the loaded piggyback car and the rear of the locomotive northbound; between the car and the caboose southbound. Train 57 with three diesel units, 16 loads and 35 empties, operated at an average speed of 28.8 mph and a maximum speed of 45 mph. Train 58, with the same motive power, had 28 loads, 6 empties out of Van Buren; 46 loads, 8 empties out of Stockholm; 49 loads, 8 empties out of Caribou, and 89 cars out of Presque Isle. It averaged 32 mph, with a 47-mph maximum speed.

Observations made of both movements were: (1) Vertical movements of rear of tank-trailer were normal and confined to deflection of springs and tires. (2) There was no latitudinal movement of tank trailer. (3) Maximum impacts northbound were all within Zone 1. Southbound, three impacts entered Zone 2; all others were in Zone 1. The Zone 2 impacts were due to slack.

Road test conclusions: Equipment used under similar conditions will safely withstand the impacts and service requirements.

As a result of the tests it was recommended that this arrangement of load suspension of similar highway tank-trailers be accepted for TOFC service.

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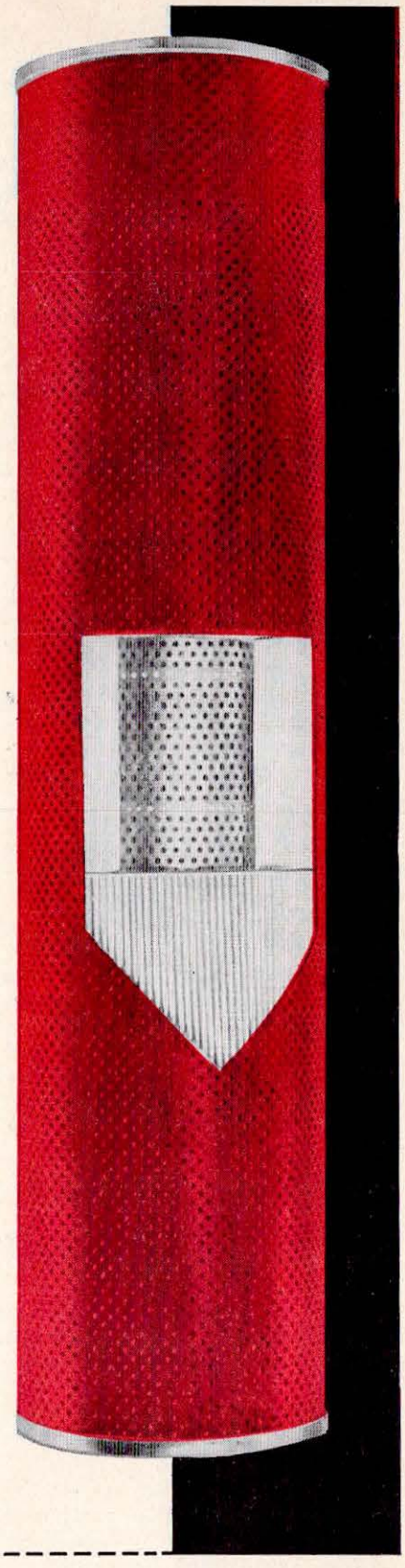

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6. Rinse Basket in clean water or with steam hose
7. Dry Basket
8. Install New Cartridge in cleaned Basket
9. Transport from Cleaning Room to Locomotive
10. Install Basket in Filter
11. Close Filter Case

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"The advantage of a wrist watch is its accessibility. On the other hand, a pocket watch is larger, and hence easier to read; there is less danger of misreading it. Also, being larger, a pocket watch can be more substantially made. It is less subject to shock, motion and temperature change—an important consideration for active, outdoor workers such as track patrolmen and freight trainmen. A pocket watch, therefore, should be more accurate, more dependable, more durable, and easier to maintain than a wrist watch for the same price.

"A railroad watch *must* be accurate and dependable because under timetable and train-order operation an error in time can lead to two trains colliding.

"The reason airlines and the armed forces use wrist watches may be simply that accessibility is more valuable to them than accuracy and dependability. In at least one instance where accurate time was needed (determining geographical position by observing the stars), the armed services used pocket watches. The World War II Air Force navigator's watch was a 24-hour dial modification of a standard railroad watch."—*George B. Dutton, Jr., research assistant, Detroit, Toledo & Ironton.*

"Our friends in the watch inspection business tell us it would be quite difficult to set on a wrist watch the same standard that can be set on a pocket watch. Other points they bring out are that top performance of a good wrist watch is 10 years, and that servicing time would have to be reduced to 12 months instead of our present requirement of 18 months. There is no limit as to the performance of a standard pocket watch.

"The nature of the work of an individual who is getting on and off cars, throwing switches, etc., would naturally result in damage to a wrist watch. No difficulty would be experienced with a pocket watch.

"While I know nothing about operating regulations of the Air Force or commercial airlines, I doubt if their physical layout or operating rules compare with those of railroads, which set forth the manner in which opposing trains clear each other.

"Officials above the rank of trainmaster are not required to wear standard watches. While many trainmasters wear wrist watches, they also carry standard pocket watches.

"I am not in favor of a standard railroad wrist watch at this time."—*S. C. Cherry, general superintendent, Norfolk Southern.*

Conducted by George C. Randall, district manager, Car Service Division, retired, this column is a forum for questions railroaders are discussing today. We invite both questions and answers from readers at all levels of responsibility. We'll pay $10 to any reader submitting a question that forms the basis for a column discussion.

Why Not Standard Railroad Wrist Watches? was asked by a correspondent who pointed out that airlines and the armed forces operate satisfactorily with wrist watches and suggested that railroad standards of accuracy might be achieved in wrist watches currently available. A railroad researcher and a general superintendent here record their doubts that wrist watches would be suitable. We'll have more on this question later. Let's hear from someone who favors the wrist watch.

Do Intermediate Shippers Gain From Through Blocking? was first discussed here June 15. The letter on **Rail Joints** concludes this topic.

Through Blocking: Do Intermediate Shippers Gain?

"It is of course possible for an intermediate shipper to suffer because an adjacent yard is receiving less service now than formerly as a result of more trains overheading such a yard. What he may be suffering adjacent to his plant may be made up by far better service in the area beyond. Over the years, railroads have been working at improving their service by eliminating excessive yard-to-yard movements. A well-planned operation should run one train to the farthest possible yard, the next to a yard less distant, etc. This would blanket the entire railroad with the best possible service.

"In all such discussions [traffic] volume is important. The greater the volume (consistent with the carriers' capacity to handle it), the greater becomes the carriers' financial capacity to offer diverse services to both short-haul local shippers and long-haul overhead shippers.

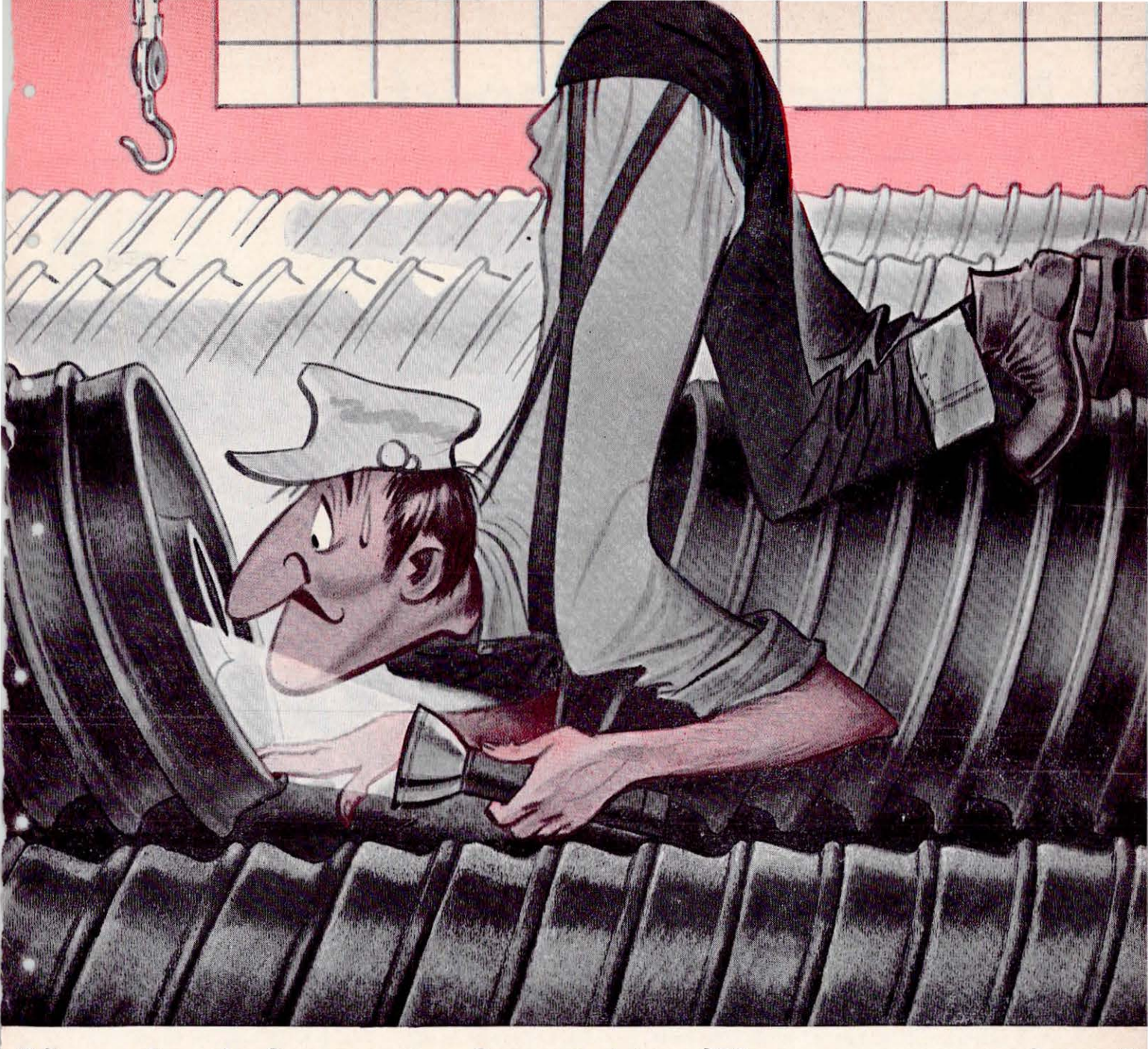
"Take away volume, and the service is bound to deteriorate as compromises have to be made by the carriers between these two groups."—*Z. Chafee, III, manager, freight traffic research, Pennsylvania.*

More on Rail Joints

"C. L. Marsh's letter on placement of rail joints (RA, July 6, p. 15), interested me greatly. I'm no engineer, but I can't believe the 'rhythmic, harmonic rolling motion' of cars over staggered joints would be constant.

"It seems to me that a given car would roll from side to side only at a given span of speed. I noticed this on a line with poor ballast several years ago. The car rocked badly at a speed I judged at about 40 mph, while at higher speeds the rolling stopped. So this disadvantage of staggered joints would not be as important as the constant pounding of the weights of a car end on squared joints.

"Perhaps Mr. Marsh has the solution in his suggestion that joints be staggered only by a few feet rather than by half a rail length. But as a contented passenger I hate to lose the regular rhythm of the lullaby produced by the present system."—*Robert R. Morrison, East Carolina College, Greenville, N. C.*



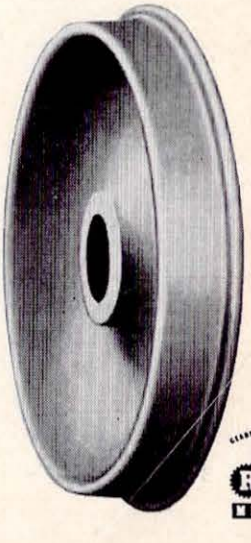
You don't have to hunt 'em like you used to!

Yes . . . the day of the big tape size hunt—with the railroads holding the bag—is a day of the past.

That's because Griffin figured out a way to cast the new EQS virtually to specified size. (That may sound easy, but it wasn't. Wheel producers had been trying to do it for years.)

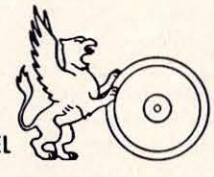
Naturally, having fewer tape sizes simplifies your wheel inventory . . . as well as saving time and tempers.

Saves *money*, too . . . because if you want to see a wheel that stubbornly stands up under high speeds and heavy loads, try the Griffin EQS!



GRIFFIN EQS

E LECTRIC Q UALITY S TEEL

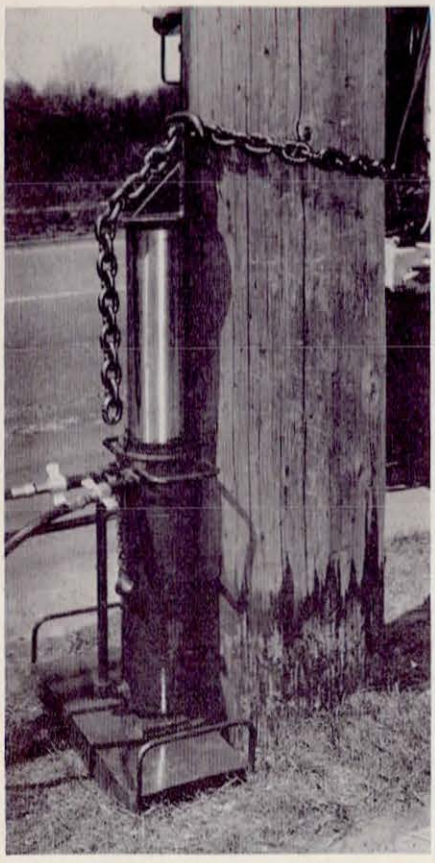


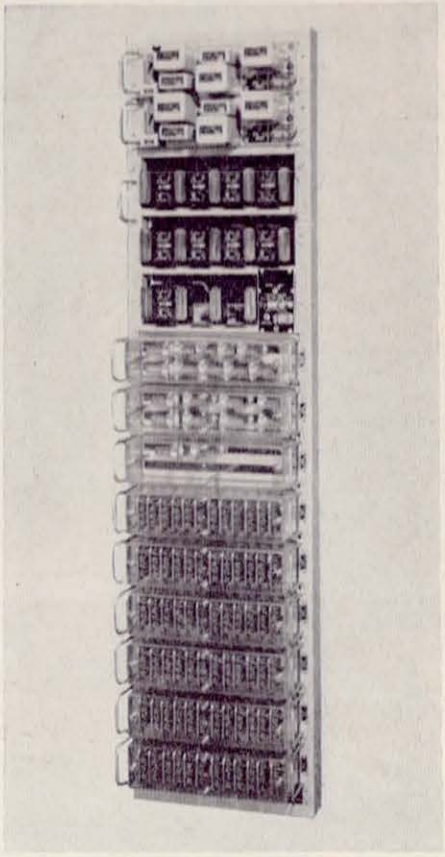
GRIFFIN WHEEL COMPANY, 445 N. Sacramento Blvd., Chicago 12, Illinois

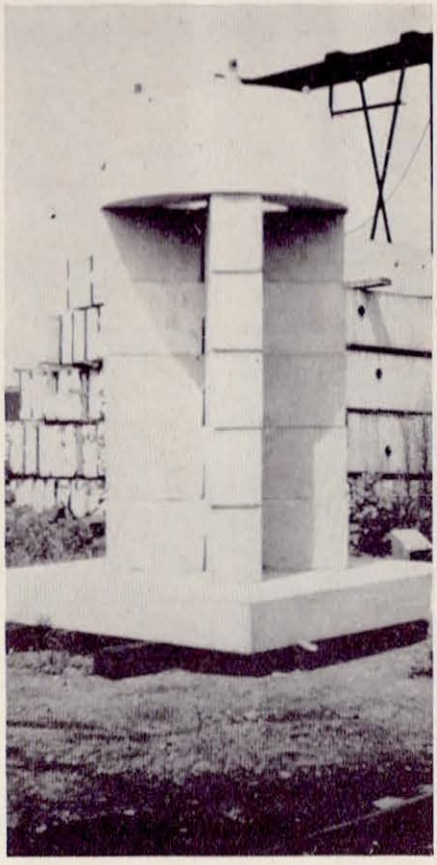
In Canada: Griffin Steel Foundries, Ltd., St. Hyacinthe, Quebec

Give the "green" to ***GRIFFIN*** *and watch your costs go down!*

New Products Report







Pole Jack

A hydraulic jack is available that is claimed to speed the pulling of poles out of the ground to eliminate physical effort from the work. Designated the Holan Series 4600 Pole Jack, it weighs 96 lb and has a lifting capacity of 42,000 lb. The jack operates at a maximum of 1,500 psi and is equipped with a 6-in. diameter ram that has an 18-in. stroke. A detachable base plate weighs an additional 43 lb. The jack and base are arranged in such a manner that the jack can be tilted to allow for uneven ground. The jack is placed next to the pole and a chain wrapped around the pole and through a hole in the casting on top of the ram. The hydraulic lines are connected from the jack to a four-way valve which is mounted on a truck body. Pulling a control lever activates the ram. Design features include a shield that prevents the chain from hanging against the piston, and a scraper ring that is said to keep any dirt from getting between the casing and the piston. *Holan Corporation, Dept. RA, 4100 West 150th St., Cleveland 35, Ohio.*

High-Speed Code Control

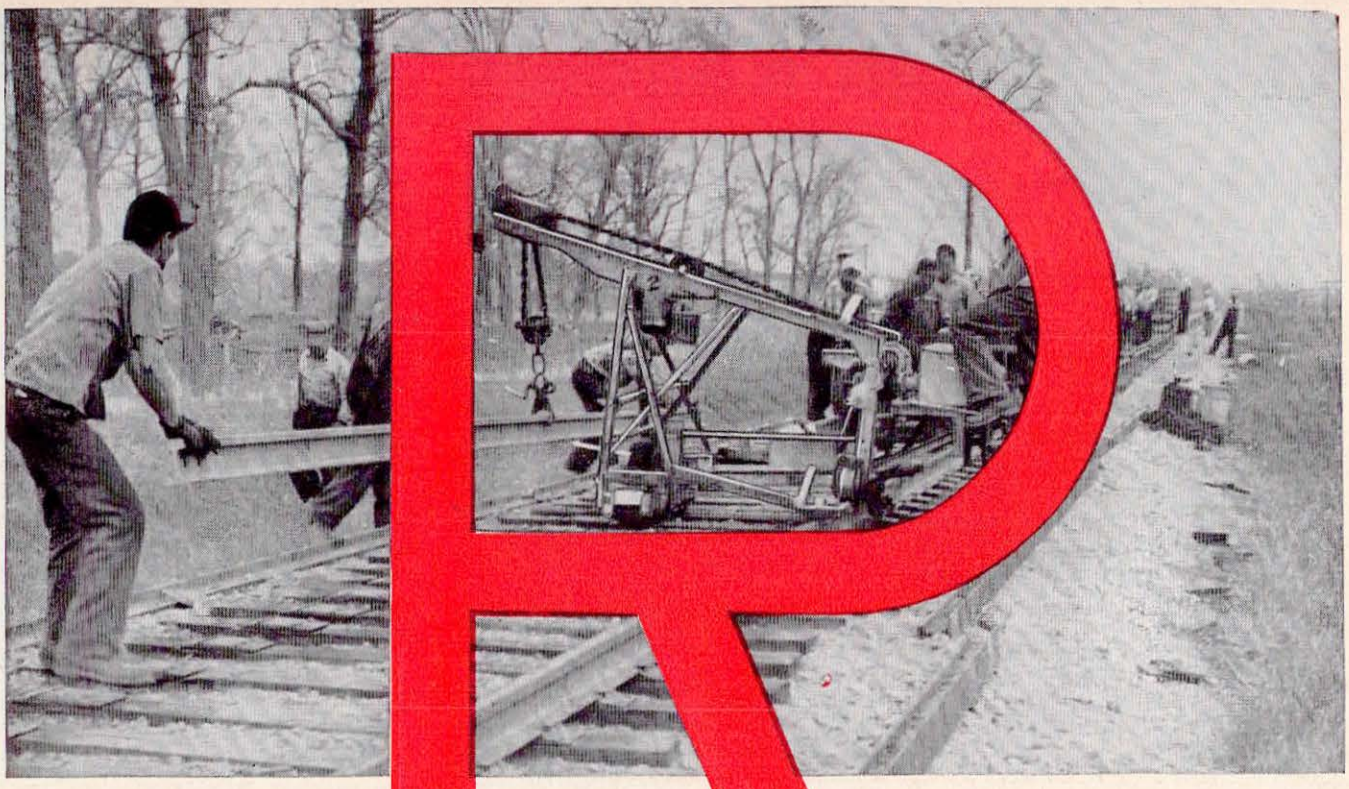
The new 528 high-speed code control system is a means whereby all switches, signals, and associated functions at a number of large railroad interlocking locations can be controlled from and indicated to a remote location or office over a two-wire circuit. This new, multiplex code scheme consists of two completely independent systems. The first is a multi-station control system. and the second is a single-station indication system.

The multi-station control system is an all relay system which employs a two-wire direct-current polarized line circuit.

Features of the new code system: (1) uses the newly developed Style G relay; (2) has completely separate control and indication transmission channels; (3) utilizes a transistorized registry unit at office; (4) uses frequency shift carrier; (5) highly concentrated function control and indication; (6) polar control code operation—no time code involved. *Union Switch & Signal Division, Dept. RA, Westinghouse Air Brake Company, Swissvale, Pa.*

Signal Foundations

The largest precast sectional foundation yet produced by this company has been announced by the Permacrete Products Corporation of Columbus, Ohio. It is stated that the new foundation is being used for bracket post signals and under the individual legs of 3-, 4-, 5- and 6-track signal bridges. Features are said to include a heavily reinforced base, unexposed bolt anchorage, 85% of the base area exposed for vertical earth loading to resist overturning, right-angle vertical columns which provide maximum resistance to rotation and a required soil-bearing pressure about one-half that required for monolithic or field-poured foundations. The base weighs 2,200 lb. Each column section is 12 in. high and weighs 350 lb. The top section is 17 in. high and weighs 1,200 lb. The foundation may be assembled and bolted together at the factory and placed with a crane or furnished unassembled and installed without a crane. *Permacrete Products Corporation, Dept. RA, 1839 South Wall Street, Columbus 7, Ohio.*



SETS NEW RECORDS IN RAIL LAYING

MECO POWER RAIL LAYER

Makes new records in Time Saving! This machine greatly speeds up the laying of rails of every weight and length. Makes new records in Economy! The Meco Power Rail Layer is inexpensively operated by a standard 4-cycle power unit, usually with a machine crew of 3 or 4 men.

A Meco easily sets in the rails for a large gang of 100 men or more. And—the first cost is only a fraction of that for other rail laying machines.

★ **Maintenance Equipment Company** ★
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- **MECO RAIL AND FLANGE LUBRICATORS**

double to quadruple life of curved rails and locomotive wheel flanges. Available for single and double rail installations, main lines, yards, industrial tracks, running rails and guard rails.

- **MACK REVERSIBLE SWITCH POINT PROTECTOR**

Prolongs the life of switch points about 4 times; then is reversed and again extends the switch point life for another similar period.

- **BRUSH CUTTER**

Cuts right-of-way maintenance costs. One operator with the new, light-weight, Southworth can do the work of eight men using brush hooks or scythes. Extreme maneuverability, "work horse" power, light-weight are important advantages.

Letters from Readers

Favors Nation-Wide RRs

Flushing, N. Y.

To the Editor:

I have studied the subject of railroad consolidation for about 12 years.

The Barriger proposal reported in the Aug. 3 number of Railway Age is the only constructive proposal that I have seen published. Proposals favoring regional monopolies leave me cold.

The American public wants competition. That is brought out in CAB hearings. I think they would want more than the two national railway systems —at least three and perhaps four. They could not all serve all principal points, but could have broad national scope.

Herbert H. Whitehead
Economic Consultant

'Excellent Job'

Poughkeepsie, N. Y.

To the Editor:

We are quite proud of our efforts [to handle freight cars efficiently] and feel that you did an excellent job in covering [RA, July 27, p. 39]. At present we have one copy of this issue in our reception hall where all may, if they wish to do so, read it.

I wish to express my personal appreciation and that of Western Printing & Lithographing Company . . .

Lewis Wilbur
Traffic Manager

'The Public's Side'

Greenville, N. C.

To the Editor:

In your July 6 issue appeared a letter from A. T. Dohman, captioned "Labor's Side." It describes the duties of the fireman and mentions that labor unions expect to win the "battle with the carriers."

If anyone is interested in "The Public's Side," here is one view. First, I agree fully that the fireman should be retained. When I am riding at 79 miles per hour or more, I want to know that there is more than one fallible human being in the cab, particularly when the engineer may be three times as old as the bus driver I see on the highway outside. I know personally of one case where the engineer slumped and except for the fireman a streamliner would have gone through a state capital at full speed—if it stayed on the track, that is. The carriers are talking of eliminating the last person who should be removed.

On the other hand, I cannot understand why a "battle" is desirable when an industry is in such straits as the railroads. I am fed up with the unions and their endless demands for higher wages. Every year, up go the wages and up go costs of living. Retired persons, teachers and millions of others then have to strike another comfort from their budgets. As a teacher, I make about half the monthly salary of a road engineer—and this after struggling through eight years of college. The steel workers are obviously pricing their product off the market; will the rail workers allow their union leaders to lead them up a similar blind alley?

Robert R. Morrison
Asst. Professor, Foreign Languages
East Carolina College

(In Canada, "firemen" are still employed on passenger locomotives and head brakemen ride the cabs of freight locomotives. However, Professor Morrison wouldn't have to worry if there were only one man in the cab, because, with the application of "dead man control," the train stops automatically if the operator is incapacitated. Thousands of rapid-transit trains are operated daily with "one man in the cab," and an enviable safety record.—Editor)

'Double Bottom' Crews

Erie, Pa.

To the Editor:

Is Guy L. Brown asleep at the throttle, in the matter of putting people to work or "making jobs"? [RA, July 6, p. 9]. He apparently must be or the "Chief" would have his men spread over the highways like they are on the railways. For instance, why is it not required to have additional drivers on the trucks for "double bottoms"?

When additional trailers are added to tractors, why isn't a "full crew" required? How about a "flagman," too? Just recently, July 12, 1959, I read where a bus ran into the rear of a tractor trailer on the New York Thruway near Schenectady, causing serious injury to several people. (I believe the driver was killed.)

G. T. Bevan

(We agree with Mr. Bevan that "double bottoms" are dangerous and that they should be banned for that reason. We don't see the equity of their being provided "yards" free of charge, either. We doubt whether putting additional men aboard "highway trains" would make them any safer—just that many more people to be injured in case of accident. It's the size and weight of these behemoths that make them a menace, and putting more riders on them won't reduce their bulk.—Editor)

'Thanking' Passengers

Baltimore, Md.

To the Editor:

I am sending you a copy of a letter we are currently using to thank passengers for riding our railroad. The letter has developed into one of our best "salesmen." Although it calls for no reply, we have enjoyed a tremendous volume of replies, most of which indicate that the recipients will act as our "salesmen," too.

W. E. Meuse
General Passenger Agent
Baltimore & Ohio

(Here's the letter the B&O is sending its passengers: "An anecdote that may be fact or fancy is the one of the neighbor who approached George Bernard Shaw and said: 'I passed your house last evening.' In a tone expressing deep gratitude, Shaw replied: 'Thanks, awfully.'

"Perhaps G.B.S. wasn't in the mood to welcome callers, but the employees of the Baltimore & Ohio Railroad are always grateful to those who use our service.

"We learned that you journeyed over our railroad recently. We hope that you enjoyed your trip, for your patronage means a great deal to us.

"Therefore, not for 'passing our house,' but for coming in and riding with us, we say—in a tone expressing deep gratitude—'Thanks, awfully.' "—Editor)

Reprints Wanted

St. Louis, Mo.

To the Editor:

Needless to say, we of the Wabash are delighted with the treatment given to our Streator Branch story in the July 27 issue of Railway Age. We like it so well, in fact, that we would like to have about 500 reprints . . .

L. A. Brown, Director
Advertising & Public Relations
Wabash

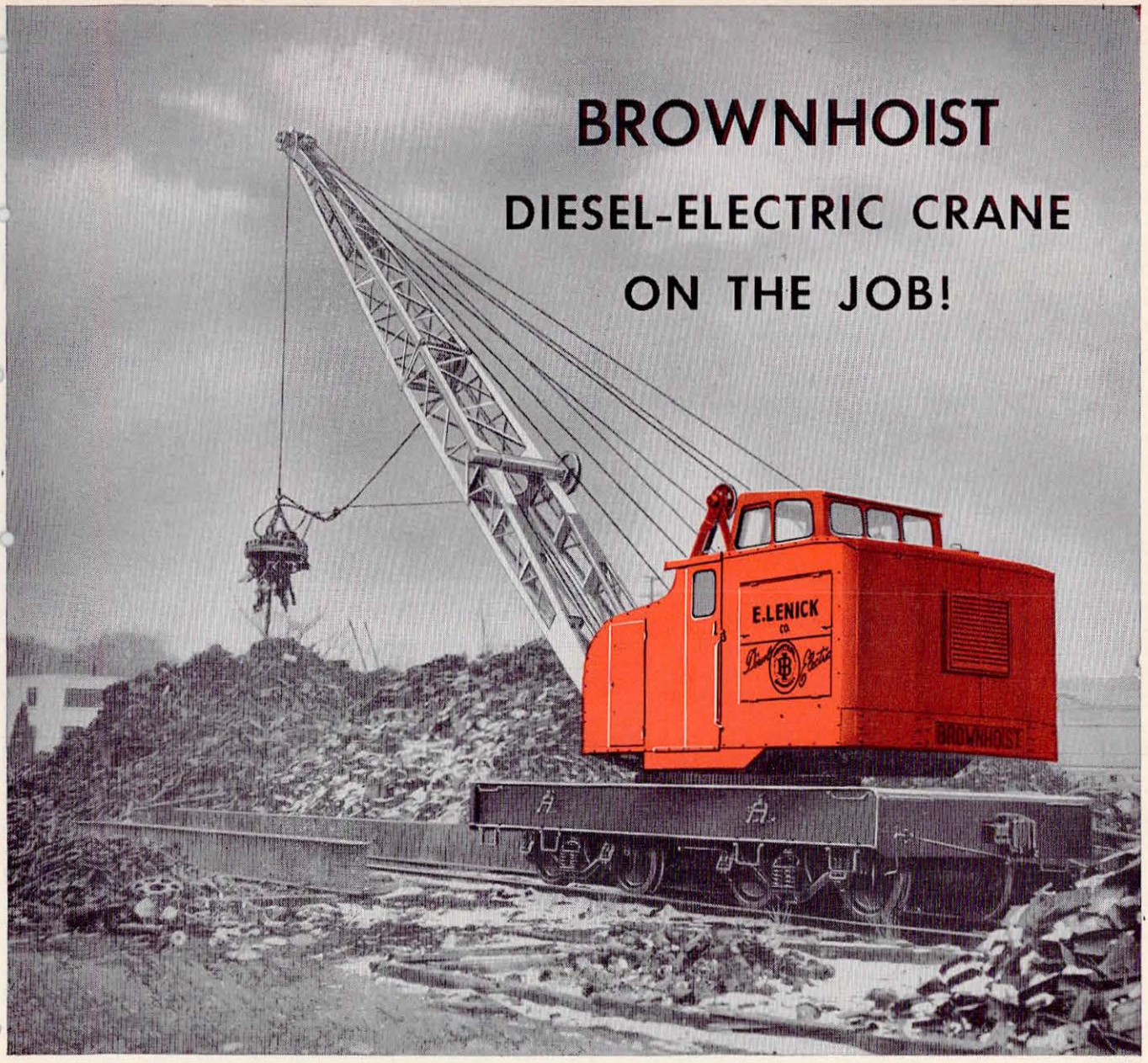
'Octopus' Victims

Sierra Madre, Cal.

To the Editor:

"The Concrete Octopus" [RA, May 18, p. 20] was enjoyed very much by the victims of same. My copy is becoming dog-eared from inspection . . .

K. Fritz Schumacher



211

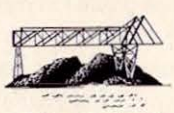
One of the big scrap dealers in the midwest, E. Lenick & Company relies on an Industrial Brownhoist 25 Ton Diesel Electric Locomotive Crane for high-capacity production and trouble-free, economical operation. The Diesel Electric Locomotive Crane is built in capacities from 25 to 90 tons. Utilizing a clam-shell bucket, hook or magnet, this versatile equipment handles materials at sea ports, steel mills, ore and coal docks and in railroad yards throughout the world. Such high performance features as exclusive 360-degree monitor-type cab, clear-vision boom, straight line power train and electric rotation have made Industrial Brownhoist Diesel Electric Locomotive Cranes the world's most reliable high-speed, high capacity material handling equipment.

For more information on specialized equipment in any tonnage and capacity, write for Industrial Brownhoist catalog #562.

BROWNHOIST

CLAMSHELL BUCKET

250 TON WRECKING CRANE


COAL-ORE BRIDGE

CAR DUMPER

LOCOMOTIVE CRANE

INDUSTRIAL BROWNHOIST CORPORATION • BAY CITY, MICHIGAN • DISTRICT OFFICES: Cleveland, Philadelphia, Chicago, San Francisco, Montreal.

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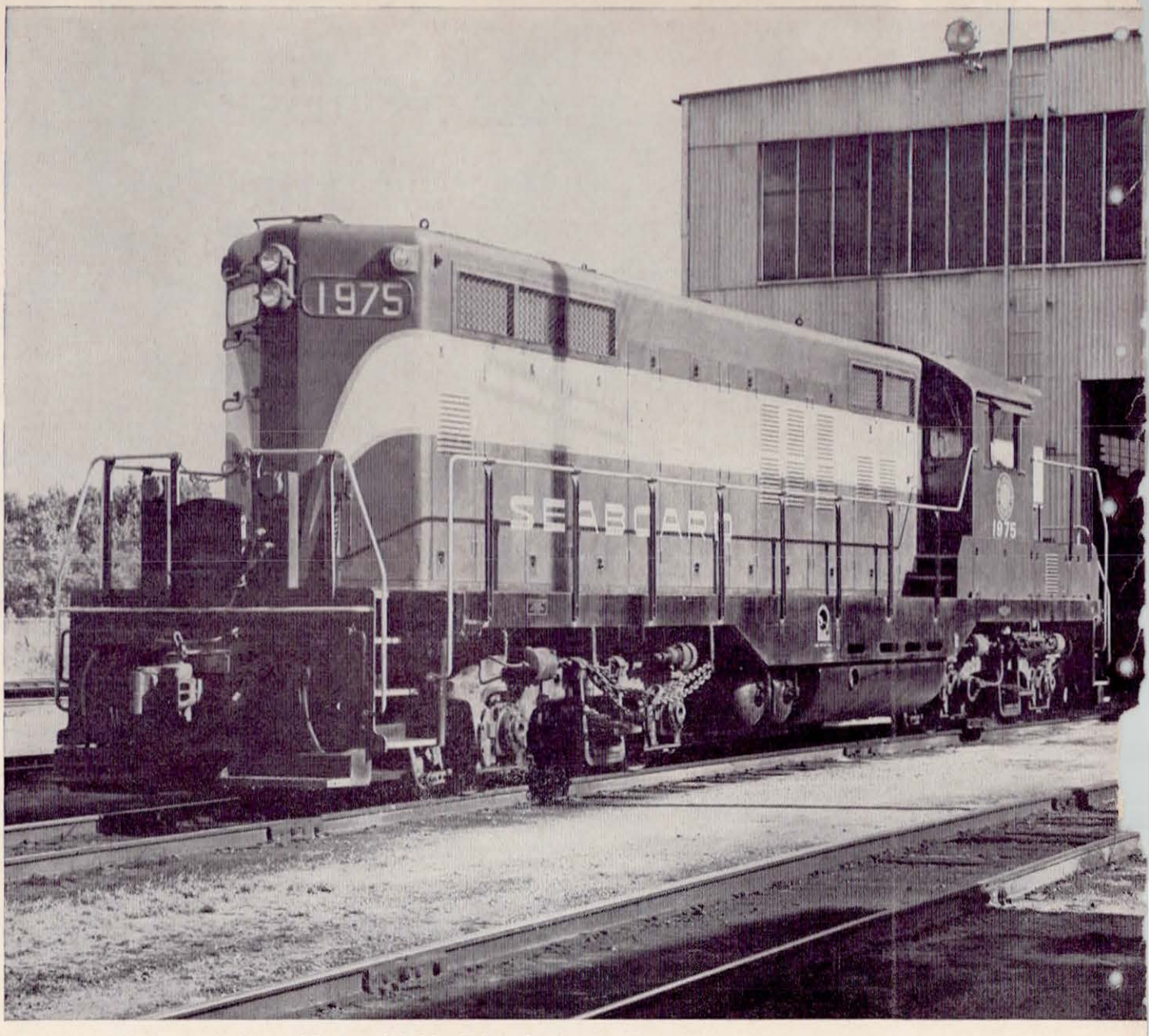


Pulling out of the Savannah shops of Seaboard Air Line Railroad is No. 1975, one of Seaboard's 69 locomotives whose engines operate with Gulf Dieselmotive oil.

300,000 test miles prove Gulf Dieselmotive oil keeps engines

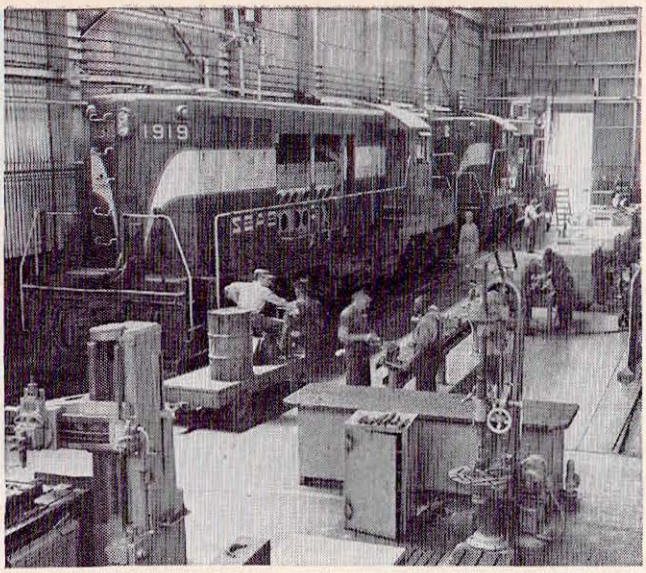
GULF MAKES THINGS

Ask C. O. Johnson, Chief Test Engineer of the Seaboard Air Line Railroad, whether Gulf makes things run better. Particularly in the lubrication of heavy-duty diesel freight engines. He checked it out, in a big way.

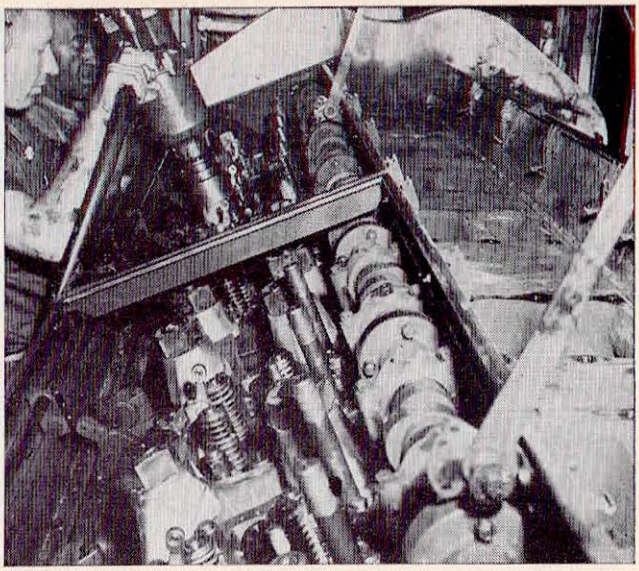
In grueling over-the-road tests which involved 300,000 miles of operation with Gulf Dieselmotive oil, and 200,000 miles with a control oil, Mr. Johnson saw plenty of proof that Gulf Dieselmotive keeps engines running cleaner, and longer between overhauls. Enough proof to cause him to specify Gulf Dieselmotive oil as the preferred lubricant for Seaboard Air Line Railroad's fleet of 69 freight locomotives.

For the test, Mr. Johnson had two power assemblies from each of 5 EMD engines removed. All critical parts were micrometrically measured in the Seaboard test laboratory, then replaced and the engines sealed.

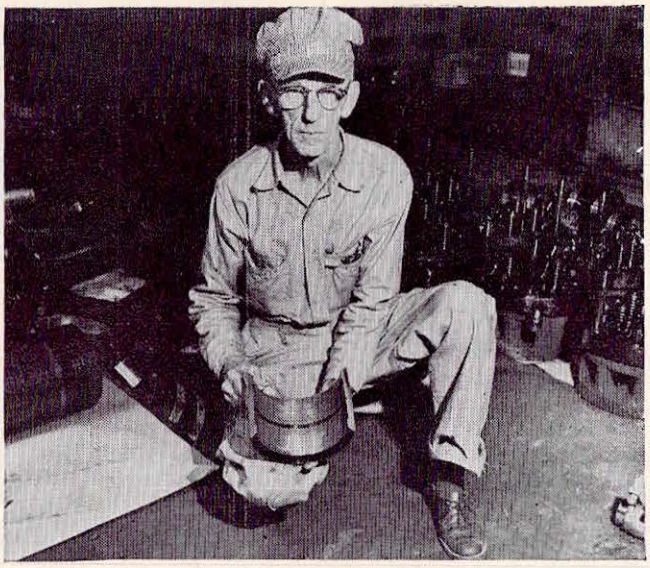
At the end of a year's operation, all 5 engines were torn down and the parts re-examined in the lab. The



This Seaboard locomotive, No. 1919, is having power assemblies changed out after 160,176 miles with Gulf Dieselmotive in the crankcase. During this time, engine oil was changed only once.



Topside view of the power unit in Seaboard's No. 1919 having power assemblies changed out. Using Gulf Dieselmotive, this engine will be good for another 150,000 to 200,000 miles before power assembly change-out is required.



A. T. Cubbedge, Mechanical Foreman at Seaboard's Savannah shops, holds a connecting rod bearing shell from No. 1919. The shell is remarkably free from wear after 160,176 miles of operation with Gulf Dieselmotive oil.

Seaboard Railroad and Gulf work together to insure cleaner engines with Gulf Dieselmotive oil. L. B. Alexander, left, Seaboard Master Mechanic, checks a locomotive at the Savannah shops with Gulf Sales Engineer Joe B. Scott, Jr.

running longer between overhauls

RUN BETTER!

most striking test result was the cleaner condition of the engines that were lubricated with Gulf Dieselmotive.

There was a marked decrease in varnish deposits. Where oil had been sludging before, the greater reserve of detergency in Gulf Dieselmotive had kept sludge formation to a minimum.

Your diesel engines can run cleaner and longer on Gulf Dieselmotive oil. Try it—and see how Gulf makes things run better. Call your Gulf office or mail coupon.

GULF

GULF OIL CORPORATION
Dept. DM, Gulf Bldg., Pittsburgh 30, Pa.

Send more information on Gulf Dieselmotive oil.

Name_____

Title_____

Company_____

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City_____ Zone_____ State_____

RA-5285

NON-OPS ASK INCREASE *(Continued from page 10)*

could collect the insurance. He also said he would like to see the policy before expressing an opinion about the plan.

Labor Act Procedures

Railway Labor Act procedures in a nationwide wage case are not tied to a timetable. They may continue indefinitely. A case which is kept moving, however, could cover the entire course from the filing of demands to issuance of an emergency board report in about four months. Here are the procedures:

Labor-management conferences must be held on individual roads within 30 days after demands are filed. In recent years, these meetings have been brief and actual negotiations have been on an industry-wide basis—handled by regional conference committees of the railroads and a like group of employee representatives.

If no settlement is reached and the negotiations come to an impasse, any party may invoke services of the National Mediation Board—or the board may proffer its services. In one way or the other, NMB usually gets into a case at this stage. If its mediatory efforts fail, it usually proposes arbitration. The parties are free to accept or reject arbitration. If they accept it, they must accept the decision of the arbitration board.

If arbitration is rejected and a strike threat is posed, NMB may certify the case to the President for appointment of an emergency board. The act provides that an emergency board shall have 30 days to make its report and that no wage or other matter in issue shall be changed during the 30 days after the report is made. In some cases there have been mutual agreements by parties which gave emergency boards more time. There is no requirement that emergency board recommendations be accepted.

Articulated Flat Cars Solve Piggyback Problem

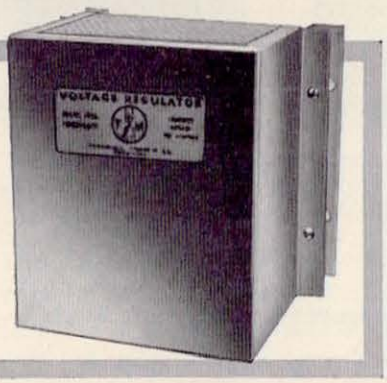
Wheel pockets to lower overall height and a drawbar connection making a single 107-ft articulated unit are features of 30 piggyback cars just ordered by the Baltimore & Ohio from its Mt. Clare shop at Baltimore. The road has been operating five cars of this type for some time.

These tandem wheel-pocket flat cars were designed to provide the flexibility needed to meet restrictive tunnel clearances on the B&O's St. Louis line. They eliminate time-consuming re-routing of trailers with an overall height of 10 ft 11½ in. or greater.

It was found that long-wheelbase cars (75- and 85-ft) increased clearance difficulties due to overhang on sharp curves. However, use of this longer equipment was economically attractive because a single car can carry two of the longer trailers. Best clearance was provided by the B&O's standard 53 ft 6 in. piggyback cars because of their shorter wheelbase and 41-in. deck height.

Two of these shorter cars were joined into a single articulated unit with the drawbar connection. Next, wheel wells were built into the decks of the flat cars which make it possible to lower trailers 8⅜ in. The result has been that all trailers of 11 ft 9 in. overall height can be handled. B&O officers say that modification of the flat cars made it possible to reduce piggyback operating costs and made it unnecessary to purchase special equipment. They report that transit time savings of up to 8 hours are possible for those cars which formerly had to be re-routed.

NEW F-M Static Voltage Regulator
INSTANTANEOUS PRECISION PERFORMANCE



- No moving parts
- Dirt- and moisture-proof
- Maintenance-free

Maintains output voltage within 1% of setting from no-load to full load. Instantaneous response compensates change in generator speed and load in microseconds. Generator voltage recovery within tenths of a second. No deteriorating effect from maximum field current or ambient temperatures.

Exceptionally compact (9″ x 9″ x 8″ deep). Fits into less space than the now obsolete moving contact regulators. Requires no shock mounting. Contact representative or write Fairbanks, Morse & Co., 600 S. Michigan Ave., Chicago 5, Illinois for details.

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LOCOMOTIVES • DIESEL, DUAL FUEL AND GAS ENGINES • GENERATORS • SCALES
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Dividends Declared

BEECH CREEK.—50¢, quarterly, payable Oct. 1 to holders of record Sept. 5.

COLORADO & SOUTHERN.—4% non-cumulative 1st preferred, $2, semiannual, payable Sept. 17 to holders of record Sept. 2.

DAYTON & MICHIGAN.—common, 87½¢, semiannual, payable Oct. 1 to holders of record Sept. 15; 8% preferred, $1, quarterly, payable Oct. 6 to holders of record Sept. 15.

DELAWARE & BOUND BROOK.—50¢, quarterly, paid Aug. 20 to holders of record Aug. 14.

DELAWARE & HUDSON.—50¢, quarterly, payable Sept. 28 to holders of record Sept. 10.

DENVER & RIO GRANDE WESTERN.—25¢, quarterly, payable Sept. 14 to holders of record Sept. 4.

DOVER & ROCKAWAY.—$3, semiannual, payable Oct. 1 to holders of record Sept. 30.

ERIE.—5% preferred, $1.25, quarterly, paid Sept. 1 to holders of record Aug. 7.

ERIE & PITTSBURGH.—87½¢, quarterly, payable Sept. 10 to holders of record Aug. 31.

GULF, MOBILE & OHIO.—common, 50¢, quarterly, payable Sept. 14 to holders of record Aug. 24; 5% preferred, $1.25, quarterly, payable March 14, 1960, to holders of record Feb. 23, 1960.

ILLINOIS CENTRAL.—50¢, quarterly, payable Oct. 1 to holders of record Sept. 1.

KANSAS CITY SOUTHERN.—common, $1, quarterly, payable Sept. 15 to holders of record Aug. 31; 4% non-cumulative preferred, 50¢, quarterly, payable Oct. 15 to holders of record Sept. 30.

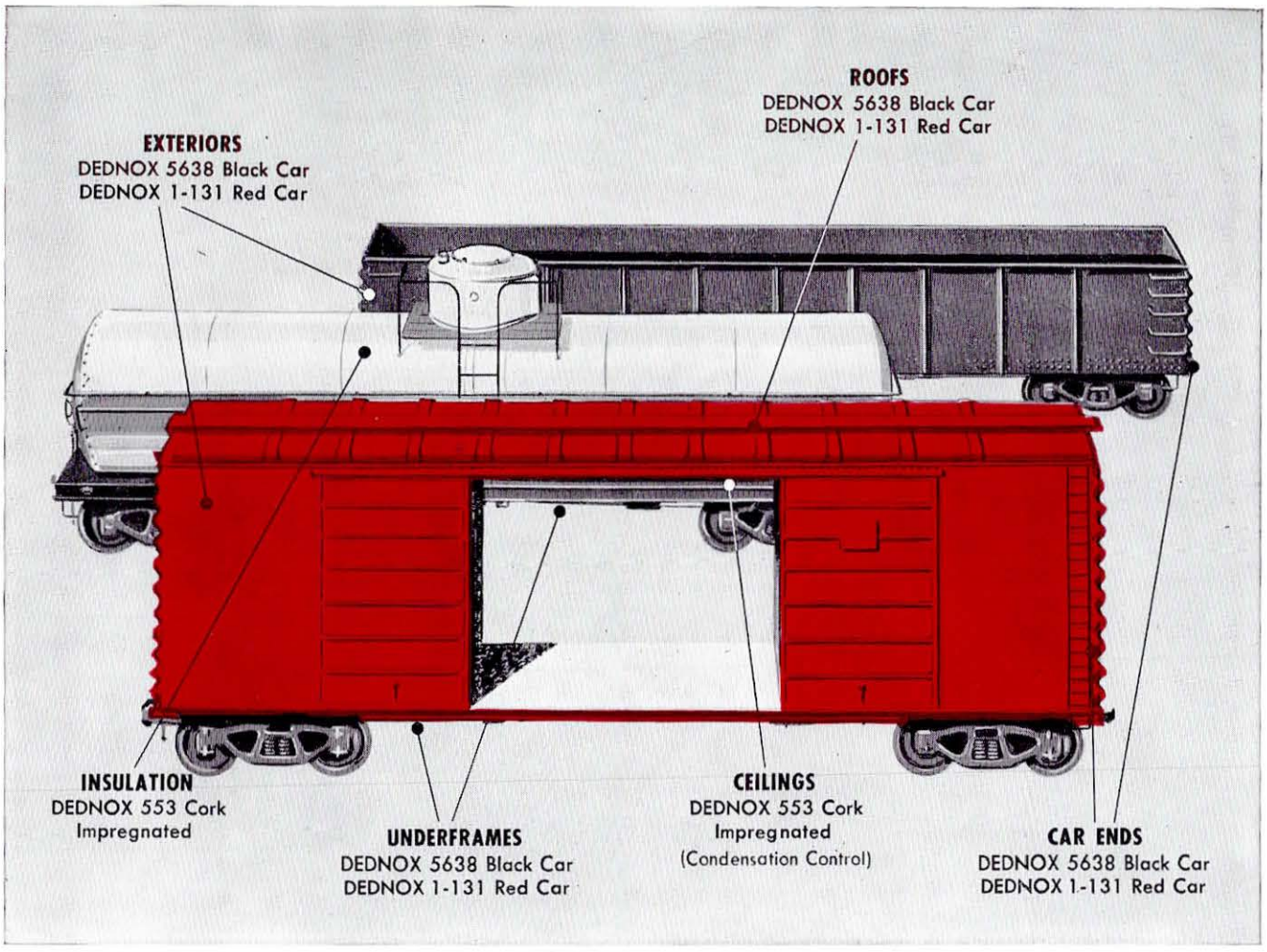
LAKE SUPERIOR & ISHPEMING.—40¢, quarterly, payable Sept. 15 to holders of record Sept. 1.

MAINE CENTRAL.—5% preferred, $1.25, accumulative, paid Sept. 1 to holders of record Aug. 18.

NORTH PENNSYLVANIA.—$1, quarterly, paid Aug. 24 to holders of record Aug. 18.

PITTSBURGH, FORT WAYNE & CHICAGO. — common, $1.75, quarterly, payable Oct. 1 to holders of record Sept. 10; 7% preferred, $1.75, quarterly, payable Oct. 6 to holders of record Sept. 10.

Keep your rolling stock rolling . . .



Protect these Trouble Spots with Time-Tested PITT CHEM DEDNOX® Coatings

MAINTENANCE of rolling stock is much too costly to consider half-way corrosion control methods. Only the application of a *proven*, heavy-duty protective coating assures adequate long-term protection.

Pitt Chem *Insul-Mastic* DEDNOX Coatings afford this protection because they are specifically geared to meet the variety of rugged conditions encountered "on the road."

For almost thirty years DEDNOX has given long-lasting, economical protection to railroad equipment. Special formulations of gilsonite (one of the most chemically resistant bitumens known), with selected asphaltic bases and mineral fillers, permit DEDNOX coatings to withstand extreme variations of temperature, moisture, dryness and abrasion.

7143 B

Don't contribute your share to the estimated $300 million annual cost of corrosion damage to rolling stock. Protect surely and economically with Pitt Chem *Insul-Mastic* DEDNOX Coatings.

For complete Pitt Chem DEDNOX information and/or technical service write or call *Pittsburgh Coke* today.

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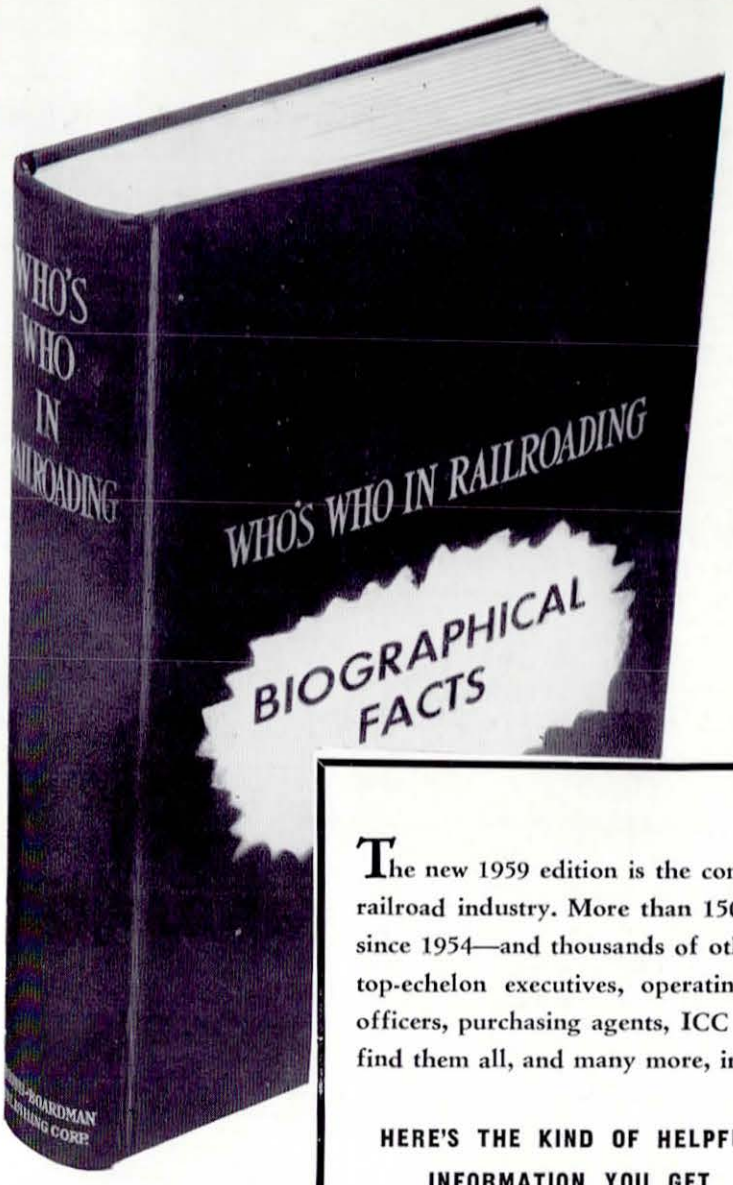

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MARKET OUTLOOK *at a glance*

Carloadings Rise 1.2% Above Previous Week

Loadings of revenue freight in the week ended Aug. 29 totaled 548,820 cars, the Association of American Railroads announced on Sept. 3. This was an increase of 6,259 cars, or 1.2%, compared with the previous week; a decrease of 97,406 cars, or 15.1%, compared with the corresponding week last year; and a decrease of 196,800 cars, or 26.4%, compared with the equivalent 1957 week.

Loadings of revenue freight for the week ended Aug. 22 totaled 542,561 cars; the summary, compiled by the Car Service Division, AAR, follows:

REVENUE FREIGHT CAR LOADINGS
For the week ended Saturday, Aug. 22

District	1959	1958	1957
Eastern	76,073	87,032	117,349
Allegheny	77,774	107,519	143,568
Pocahontas	46,815	52,527	65,930
Southern	111,894	112,453	124,042
Northwestern	69,450	104,434	128,758
Central Western	110,489	120,992	125,150
Southwestern	50,066	49,274	54,443
Total Western Districts	230,005	274,700	308,351
Total All Roads	542,561	634,231	759,240
Commodities:			
Grain and grain products	51,348	57,712	53,290
Livestock	5,490	5,274	6,250
Coal	97,325	113,479	137,760
Coke	3,007	5,967	11,037
Forest Products	42,082	38,884	43,442
Ore	10,611	54,890	85,333
Merchandise l.c.l.	41,729	49,367	55,110
Miscellaneous	290,969	308,653	367,018
August 22	542,561	634,231	759,240
August 15	543,844	626,314	750,640
August 8	532,304	619,204	740,471
August 1	544,464	622,678	740,708
July 25	536,430	608,065	736,407
Cumulative total, 34 weeks	20,565,936	18,948,763	23,539,154

PIGGYBACK CARLOADINGS.—U. S. piggyback loadings for the week ended Aug. 22 totaled 8,072 cars, compared with 5,501 for the corresponding 1958 week. Loadings for 1959 up to Aug. 22 totaled 262,534 cars, compared with 165,498 for the corresponding period of 1958.

IN CANADA — Carloadings for the seven-day period ended Aug. 21 totaled 80,661 cars, compared with 79,501 cars for the previous seven-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
Aug. 21, 1959	80,661	24,454
Aug. 21, 1958	76,663	24,579
Cumulative Totals:		
Aug. 21, 1959	2,420,105	903,056
Aug. 21, 1958	2,385,009	910,508

New Equipment

FREIGHT-TRAIN CARS

► *Baltimore & Ohio.*—Will equip 100 box cars with aluminum interior linings. Fifty sets of a new tongue-and-groove design will be supplied by the Aluminum Company of America, and 50 sets of Inner Liners (RA, March 30, p. 57) will be supplied by Reynolds Metals Co.

► *Northern Pacific.*—Ordered 25 85-ft Clejan piggyback flat cars from General American at a cost of approximately $350,000. Delivery is scheduled for first quarter 1960. NP will use the cars in the movement of new automobiles via TOFC between California and the Pacific Northwest, in conjunction with Southern Pacific.

LOCOMOTIVES

► *Railway Board of India.*—Plans to invite offers for "technical collaboration" from foreign manufacturers in the construction of 42 new freight locomotives at the Chittaranjan Locomotive Works, according to India Economic Newsletter.

PASSENGER-TRAIN CARS

► *New York City Transit Authority.*—Has announced plans for a $260-million program to retire from service 2,750 old subway cars and rehabilitate others. The Board of Estimate is being asked for $65,285,850 for this purpose in 1960 and the Authority would like to have $195 million more in the ensuing five years. Meanwhile, rehabilitation has begun on 200 obsolete subway cars on the system's BMT division. At a cost of $8,000 each, cars will be fitted with new control systems, cables, lighting, seats, etc.

New Facilities

► *Denver Union Terminal.*—Directors have authorized the expenditure of from $800,000 to $1,000,000 for a new interlocking plant, track and signal equipment at Denver Union Station. General Railway Signal Co. will furnish the NX coded control system for the installation.

► *Santa Fe.*—Ordered CTC equipment for two installations from Union Switch & Signal—Division of WAB Co. The first covers single track between Birds and Brownwood, Texas, 131 miles. Control will be from a 7½-ft style C control machine to be located at Fort Worth, Texas. The second installation covers 69 miles of single track between Barstow and Mojave, Cal. Control will be from a 5-ft addition to an existing 17½-ft style C, Fresno to Bakersfield control machine, located at Fresno.

► *Western Pacific.*—Will lay 119-lb rail welded in 78-ft lengths to replace 5.95 miles of 100-lb rail between Cholona and Sulphur, Nev., and to replace 1.38 miles of 110- and 112-lb rail near Elko, Nev. Projects, scheduled for completion this autumn, will cost an estimated $427,800. WP also plans to build 6,195 ft of track to provide two car cleaning and light repair tracks and to make necessary changes to west end ladder leads at Stockton Yard, Calif. Project will be completed in December, will cost about $142,000.

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Editors Afield

Signal and communications editor Bob McKnight has just completed a three-week swing through the Southeast. Here are some of the things he heard and saw on his trip.

Norfolk & Western is putting colors in its position-light signals. N&W is removing the center amber lamp and installing red and green roundels to provide color in the stop and clear positions, respectively. Another N&W innovation is a visible and audible warning device in approach to a Norfolk, Va., drawbridge. Two yellow lamps and two air horns are mounted on a mast about one mile from the bridge, just beyond the approach signal. With the bridge open and the home signal at stop, a train passing the approach signal will cause the yellow lights to alternately flash and the horns to sound for 12 seconds. The horns are mounted at cab level so the engineer should have no trouble hearing them. This is supplemental equipment only; the engineer is expected to obey the wayside signals that govern train movements over the drawbridge.

Hot box detection is of increasing interest to at least three southeastern railroads: N&W, Clinchfield, and Louisville & Nashville. The N&W is concentrating on installing detectors in approach to yards. The carmen inspect only those journals that are indicated "hot." On the other hand, the Clinchfield and L&N are installing their detectors where they have a high incidence of hot box set-outs. The Clinchfield's detector is about 70 miles north of Erwin, Tenn. The detector signals are sent via carrier to a recorder in the chief dispatcher's office. He reads the tape and tells the dispatcher at the CTC board in the next room if the train has to be stopped. L&N is planning to install several detectors on one of its divisions, not only bracketing a major yard, but several line-of-road installations where the hot box set-outs have been high.

Dial telephone systems are making progress on railroads in the Southeast, particularly on the Atlantic Coast Line, N&W and L&N. One thing stands out about all these systems—the clarity of the long-distance circuits. I talked and listened on several of over 300 miles, and the circuits were clear. There is no doubt in my mind that railroad communications departments can and are providing toll quality long distance voice circuits.

There are no more arguments at the L&N's Boyles yard, Birmingham, concerning the amount of terminal delay time. The signal department installed a pen-graph recorder that indicates the exact time trains pass the final terminal delay point (usually the yard limit board). L&N road crews receive a different rate of pay if they are delayed in getting into the yard, so the recorder could be a substantial money-saver.

Clinchfield's car reporting system is well under way. Clinchfield's using the universal format for train consist information. It's ready to provide a punched card, paper tape, or even connect a circuit for interchange of train consist information. Similarly, the L&N is using the universal format and is working toward its use at all yards. L&N expects to interchange paper tape with the Western Railway of Alabama at Montgomery. Also, the L&N expects to have a Univac file computer by next April 1 that will be used for car accounting and tracing. This medium size computer will also be used for traffic passing reports after the initial phase is out of the way.

The RF&P handles signal maintenance with three gangs, rather than using maintainers with specific territories. "It's working out well on this 110-mile railroad," says V. P. Shepardson, engineer signals and communications. "We are able to maintain a high standard of maintenance." He also points out that each man is able to be a specialist as well as an all-around signalman. When trouble develops, the man with that specialty can be sent to handle it.

At Richmond's Broad Street Station the RF&P has put a white light atop two dwarf signals where trains pull up so close that the engineer cannot see when the dwarf is clear. The white light is lighted when the amber dwarf lamp is lighted. This saves a member of the engine crew from having to get down on the ground to look at the signal.

David B. Green
FEC

William W. Renfro
M-K-T

John B. Goodrich
Monon

T. V. Sherrier
Monon

H. P. Cotton
N&W

C. H. Pernter
N&W

People in the News

FLORIDA EAST COAST.—David B. Green, assistant chief freight traffic officer, St. Augustine, Fla., appointed chief freight traffic officer, succeeding **H. E. C. Hawkins,** who retired Sept. 1. **Rudd K. Parsons,** freight traffic manager, succeeds Mr. Green. **C. Davies Meitin,** general freight agent, succeeds Mr. Parsons.

GRAND TRUNK WESTERN.—A. L. Ray, assistant engineer maintenance of way, appointed engineer maintenance of way, Detroit, succeeding the late **R. A. Gravelle.**

GULF, MOBILE & OHIO.—L. A. Marlin, general freight agent, Chicago, appointed assistant freight traffic manager there, succeeding **J. A. Behrle,** retired. **E. P. O'Reilly** named assistant general freight agent, Chicago.

MISSOURI-KANSAS-TEXAS.—William W. Renfro, assistant vice president—industrial development, appointed director of industrial development, Dallas, Tex., to succeed **Frank J. Heiling,** promoted (RA, Aug. 31, p. 58). **Preston M. Hays,** assistant to vice president—industrial development, named assistant director of industrial development, Dallas.

MISSOURI PACIFIC.—Federico Miranda appointed executive representative, Mexico City, Mex., effective Sept. 1. **Hugo Cervantes** named general agent, freight department, Mexico City. **G. W. Billmyer** appointed general agent, Oklahoma City, Okla., to succeed **Chris Constance,** retiring.

J. W. Hinkle appointed communications engineer, St. Louis.

MONON.—John B. Goodrich, secretary, elected secretary and treasurer. **Charles C. Dawes,** recently elected vice president (RA, June 1, p. 35), who has been acting as both vice president and treasurer, has relinquished his duties as treasurer. **T. V. Sherrier,** general superintendent, appointed assistant general manager, Lafayette, Ind.

NEW YORK CENTRAL.—George B. Forster, supervisor, rate analysis, New York, appointed assistant director of rates.

E. P. Frasher, assistant to general manager—labor relations, Boston, appointed division superintendent, Boston & Albany division, at Springfield, Mass., succeeding **C. F. Grimes,** retired. **Grover C. Kelly** succeeds Mr. Frasher at Boston.

NORFOLK & WESTERN.—H. P. Cotton, acting industrial development administrator for the North Carolina Department of Conservation and Development, will become assistant vice president—industrial development for the N&W, a new position, effective Sept. 15.

C. H. Pernter, freight traffic manager, Roanoke, Va., appointed general freight traffic manager—rates and divisions (other than coal and coke traffic), succeeding **Hilton G. Rardin,** retired. **B. R. Goodall** named general agent, Portsmouth, Ohio. **Harold J. Fink,** general agent, Philadelphia, retired.

NORTHERN PACIFIC.—L. C. Johnston, chief clerk to the stationer, St. Paul, appointed stationer there, to succeed **C. C. Anderson,** who retired Aug. 1.

PENNSYLVANIA.—J. H. Colliflower named district passenger agent at Harrisburg, Pa. **R. J. Homan** appointed freight agent at Rohrerstown-Mountville, Pa.

C. R. James, passenger manager, Pittsburgh region, retired.

PITTSBURGH & LAKE ERIE.—T. R. Fitzpatrick, vice president, Pittsburgh, Pa., retired July 31 (RA, July 27, p. 82).

RAILROAD RETIREMENT BOARD.—The reappointment by President Eisenhower of **Horace W. Harper** as labor member of this board was approved by the Senate on Aug. 19.

TEXAS & NEW ORLEANS.—Frank V. Schaub, passenger traffic and public relations manager, Houston, retired Aug. 31.

WESTERN MARYLAND.—H. W. Reed, master mechanic, Eastern division, Hagerstown, Md., retired July 1. **W. P. Gilford,** master mechanic, Western division, Cumberland, Md., appointed master mechanic—system, at Hagerstown. **T. B. Davis,** master car builder, appointed superintendent car equipment. **R. H. Stockdale,** electrical supervisor, appointed engineer electrical maintenance. **M. A. Weiner,** supervisor of welding, appointed engineer reclamation and welding. **J. L. Triplett,** engineering assistant to superintendent motive power, appointed engineer equipment design and maintenance. **D. G. Drawbaugh, Jr.,** engineer of tests, appointed engineer maintenance methods and procedures. **H. J. Koch, Jr.,** assistant mechanical engineer, appointed assistant engineer equipment design and maintenance. **R. R. Holmes,** chemist, promoted to chief chemist. **W. B. Harris,** supervisor diesel shops, appointed supervisor diesel equipment. **L. E. Reed,** assistant general foreman, Hagerstown shops, appointed general foreman there. Abolished all former positions. **W. M. Brewbaker** appointed superintendent of shops and **R. D. Hoffman** named general car inspector. All above will have headquarters at Hagerstown.

W. S. Chaney appointed assistant master mechanic, Port Covington, Baltimore, Md., and position of general foreman, Baltimore Terminals abolished. **R. B. Martin** named assistant master mechanic, Maryland Junction, Cumberland.

Alfred D. Redmond appointed Eastern traffic representative, and **James A. Scott** named assistant to foreign traffic manager, both at 605 Chrysler Building, New York 17.

Supply Trade

Walter M. Cree, general sales manager of **Edgewater Steel Co.,** Pittsburgh, Pa., has been elected vice president of sales.

Ralph H. Aul has been appointed sales engineer, Eastern Territory, **The Wine Railway Appliance Co.,** Division of Unitcast Corp., Toledo, Ohio. Mr. Aul was formerly associated with American Car & Foundry Division, ACF Industries, Inc.

William P. Morrison has joined **Servo Corporation of America** as sales manager of the Railroad Products Division. Mr. Morrison was formerly manager of the Rail Service Division of Sperry Products. **William M. Pelino,** chief data systems engineer for Servo, has been named to the newly created post of chief technical advisor for the Railroad Products Division.

William S. Winn has been appointed manager of the new Oxweld Railroad Department which has been established within **Linde Company,** Division of Union Carbide Corp., at New York. Mr. Winn was formerly manager of Linde's Eastern Region sales at New York. Other appointments in the new department include: **R. H. Bennewitz** as manager, Railroad Sales, and **W. G. Gumm** as manager, Railroad Engineering, both at Chicago; **C. R. Strutz** and **H. R. Miller** as sales managers, eastern and midwestern zones, respectively, A western zone sales manager will be appointed later.

Walter M. Cree

William S. Winn

You Ought To Know...

Louisville & Nashville received $106,000 in settlement of a damage suit against the United Mine Workers. Basis for the suit was a prolonged mine strike in eastern Kentucky. L&N had sued for $450,000 damages, plus $75,000 for each day its operations were hampered by the strike (RA, April 20, p. 44).

Soo Line has asked the ICC for permission to discontinue passenger trains Nos. 7 and 8, overnight locals between Minneapolis-St. Paul and Sault Ste. Marie. Losses are running at a rate of $220,000 a year. Engineers' wages and fuel costs, Soo notes, add up to more money than the passenger revenues the trains produce. As for public demand for the service, it's almost non-existent. By Soo's figures, an average of less than one passenger per day used the two trains last year at most of the 68 stations on the run.

Double jeopardy, in the form of two subsidized competitors for its high-density New York-New Haven passenger business, may be in store for the New Haven. The City of New Haven has announced that it has asked New York Airways to provide four-trip-a-day helicopter service over the 70-mile route. Highway competition from the parallel Connecticut Turnpike has been a fact of life for the New Haven for over a year now.

Thirty-nine million car-miles and not a single bearing failure. That's Allison Division's report on 10 months' service by its new Model 5500-3 and 6000-3 KAR-GO journal bearings. Forty-five roads are using the units. Allison, division of General Motors, began development of the KAR-GO seven years ago, completed initial lab testing in 1955 and followed up with four years of field testing.

Nominations for the second annual Seley Transportation Award—which goes "to the individual who makes the greatest contribution in the current year toward bringing about an area of agreement in the thinking or action of all concerned with a national transportation issue"—are now being accepted at the offices of the Transportation Association of America, 1000 Connecticut Ave., Washington, D.C. The award carries a gold medal and a $1,000 transportation scholarship to the college or university of the winner's choice.

Welland Canal capacity will be increased by 25% when additional tie-up facilities (to reduce the time that locks now stand idle between ships) are completed in April, 1960, according to the Canadian Minister of Transport. Cost of the new construction is estimated at $7,500,000.

Frisco No. 1522—a 4-8-2 oil-burning locomotive with 1,754,373 miles' service—is the latest addition to the National Museum of Transport at St. Louis. The 1522, built by Baldwin in 1926, was one of a series of 30 heavy-duty, high-speed passenger locomotives bought by Frisco.

Electric power from a new source—combining hydrogen with oxygen in the presence of a nickel plate in a caustic soda solution—has been demonstrated in England. Still in the development stage, the new process has possible future applications in providing transportation power, its backers claim.

National Railways of Mexico on Aug. 15 inaugurated a fast day train service between Mexico City and San Luis Potosi, 325 miles, using diesel motor cars just received from Fiat in Italy. The trains are electro-mechanically air conditioned, feature reserved reclining seats and buffet and bar services. The run is made northbound in 7 hr. 45 min., southbound in 8 hr. 5 min., approximately two hours faster than previous best schedules. Intermediate stops are made at Queretaro, San Miguel Allende and Dolores Hidalgo only.

Tallulah Falls Railway Co. has asked the ICC for permission to abandon its entire 57.1-mile line or, as an alternative, the 15-mile end of it in North Carolina. The line extends from a connection with the main line of the Southern at Cornelia, Ga., to Franklin, N.C. It has been in receivership under jurisdiction of the U. S. District Court for the Northern District of Georgia since Sept. 1, 1926.

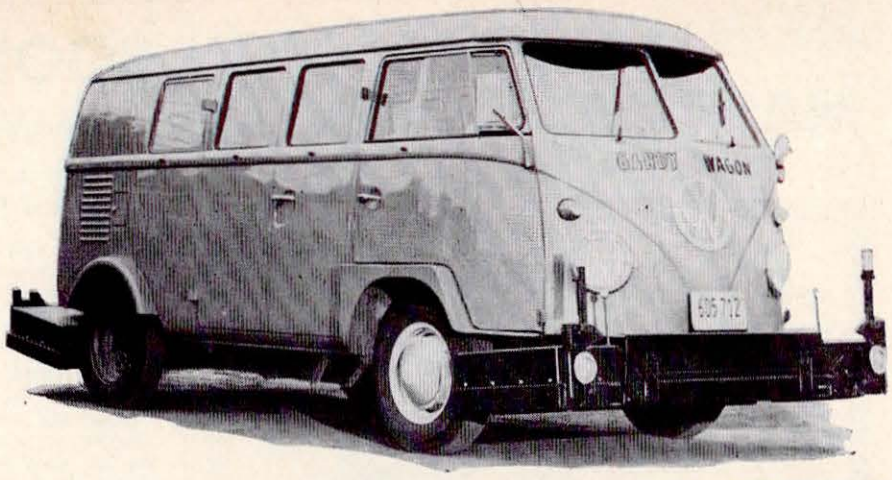
Working rules settled by last spring's agreement between the Canadian National and the Brotherhood of Locomotive Engineers may be up for discussion again in the near future. A spokesman for the CNR, asked to comment on BLE Grand Chief Guy Brown's statement that the proper time to negotiate work rules is at the beginning rather than the end of a contract period (RA, July 6, p. 9), said he felt that time had come. The CNR, he said, hopes it will be possible to begin new discussions of work rules soon.

Better transportation for New England will be the theme of an address by Maine Central President E. Spencer Miller at the 67th meeting of the New England Shippers Advisory Board in Poland Spring, Me., Sept. 21. Maine Gov. Clinton A. Clauson will be a special guest. On Sept. 22, New Haven President George Alpert will talk on the passenger service deficit.

The Alaska Railroad has leased property at Whittier to the Koppers Co. for construction of the 49th state's first wood preserving plant. The railroad, which uses approximately 65,000 pressure-creosoted ties annually, will be one of the major customers of the new plant, according to Koppers.

ACF foresees earnings for the current fiscal year "substantially above" those of last year—but, President James F. Clark has told stockholders, "we must temper our confidence by the imponderable questions of when steel supplies will return to normal, and railroad buying will reflect the increase in carloadings resulting from the strike's end."

GANDY WAGON



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The versatile Gandy Wagon does not interfere with train traffic; nor do trains interfere with it. This is because, in only 90 seconds, one man can transfer the Gandy Wagon from highway to track or back, at any grade crossing, by means of its unique electrically operated turntable-jack. At end of track run, the Gandy Wagon is just as easily turned around.

In track operation, a high degree of safety is achieved by: (1) standard 14-inch Kalamazoo wheels fitted with safety rims (these wheels negotiate self-guarded frogs); (2) entire front weight of vehicle rests on the flanged wheels which are hydraulically braked in conjunction with the car's rear wheels; (3) turntable-jack is powered by an independent 12-volt electrical system which could also power a microwave telephone.

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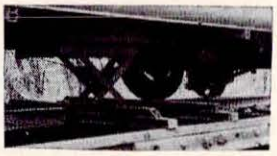

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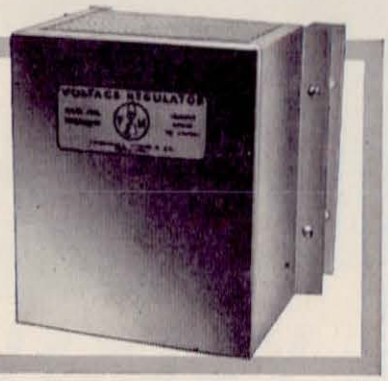

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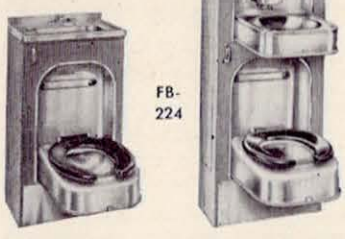
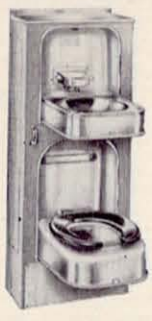


FB-224



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Car-Mile Earnings, Poor Yardstick

A yardstick that only sometimes equals 36 inches—but often varies anywhere between 18 in. and 48 in.—isn't much good for measurement. That is the kind of yardstick "earnings per car-mile" is. Unless you know how many miles the car moves, its earnings per mile don't tell you anything.

In 1958 average earnings per loaded car-mile were 47¢. In case after case, shippers and railroad men and regulators will cite earnings per car-mile of 65¢ or 85¢ or more—in comparison with average car-mile earnings—as sufficient proof that a given rate is profitable. But the profitability of a rate has to take expense into consideration—and the expense of moving cars is by no means directly proportional to distance. The expense is divided into two parts: (1) terminal expense and (2) line-haul expense.

•

Terminal expense is, usually, just about as much for a car moving 50 miles as for one moving 1,000 miles. If terminal cost is $60 per car and the car moves only 50 miles—then you have incurred $1.20 per car-mile in terminal expense alone. Say the line-haul expense is 25¢ per car-mile, then you must earn $1.45 per car-mile on this 50-mile movement, just to break even. If the movement is 200 miles, then the $60 terminal cost is spread out over four times as many miles. For the 200-mile haul a $60 terminal charge would figure out at 30¢ per car-mile. Add 25¢ for the line-haul cost and you get a total cost of 55¢ per car mile. If the haul is 500 miles, the total cost will come down to 37¢ per car-mile.

So what you have is a car which costs you all the way from $1.45 down to 37¢ a mile to move—depending on whether it travels 50 miles or 500. To say, of any particular rate, that it yields 50¢, or 75¢, or $1 or more per car-mile just doesn't mean a thing, unless you can also cite the cost of terminal handling and the line haul cost, to produce an over-all per-mile cost to compare with the per-mile earnings.

Costs of terminal handling have been increasing at an alarming rate. We have seen some computations which take the 1957 ICC cost figures for a typical box-car and mark these figures upward to give cost estimates for 1959. These computations show an increase in terminal costs on this "typical" (i.e., average loading) box car, 1949 to 1959, of 92% in the East, 74% in the West, and 65% in the South. Line-haul costs also increased in this 10-year period, but much less severely.

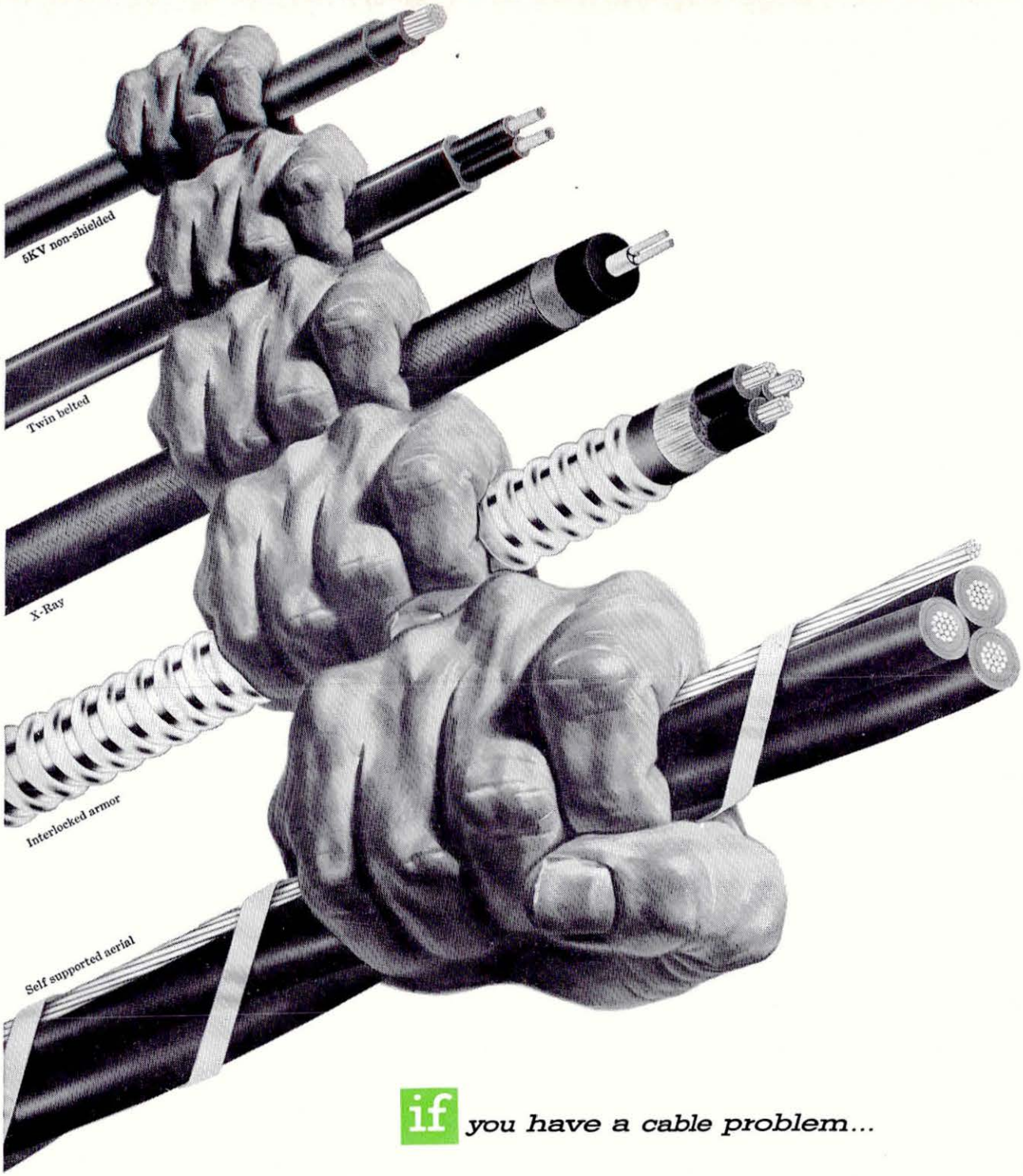
In the East, this typical box car has to run 235 miles before its line-haul cost equals the terminal cost. In the West it takes a run of 254 miles to bring line-haul cost to equality with terminal costs. In the South, the ratio is lower—170 miles of line-haul cost is the equivalent of terminal cost. While ICC cost figures probably err on the high side—that does not detract from the significance of year-to-year comparisons of the same figures.

The factors in efficient railroading that get the most constructive managerial attention are those to which convenient ratios are applied—e.g., the operating, maintenance and transportation ratios. Terminal and line-haul costs for each principal type of car handled are just as significant and important as the ratios in more general use. They merit just as intensive attention.

•

FIGURES SHOW THE WAY: A study of these and other cost comparisons is within the reach of every railroad man. All he needs is curiosity and a file of reports of the ICC's Cost Finding Section. The figures make instructive reading—but challenging rather than comforting. For example, further analysis of these figures, along with careful estimates of the cost of truck operation, suggest that the day of competing with trucks with half-loaded box cars has ended. To compete with trucks today, you need well-loaded cars (with rates to reflect the economy of heavy loading). Either that or—if you want to go out for low minimum traffic—such traffic may have to be handled piggyback or in containers. But, most important of all, what the figures suggest is the urgent necessity of a campaign to reduce per-car-mile movement costs—especially the terminal portion.

Let's not be misled by car-mile earnings which are well above the average. Except for the longer hauls, above-average earnings per car-mile may be camouflaging a ruinous loss.



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